



Ferns and allies of Montana

Montana Field Guide

Note

These PDF versions of the Montana Field Guide are intended to assist in offline identification and field work. They are not intended to replace the live Field Guide, as that version contains more information and is updated daily.

This PDF was generated 12/10/2012

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Maidenhair Fern - *Adiantum aleuticum*

http://FieldGuide.mt.gov/detail_PPADI030Q0.aspx



Global Rank: G5?
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants with a short, stout, horizontal or ascending rhizome. Leaves monomorphic, arching to erect, 10–60 cm long with a glabrous, shiny, black petiole; the blades fan-shaped, appearing palmately divided into several pinnately divided pinnae. Pinnae with 15 to 35 light green, fan-shaped to oblong pinnules, 10–25 mm long with jagged apical margins. Sori crescent-shaped, borne on edges of pinnules, covered by inrolled margins (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet rock crevices or shallow soil of cliffs, occasional in damp forest, usually in partial shade; montane, subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Lace Fern - *Aspidotis densa*

http://FieldGuide.mt.gov/detail_PPADI07030.aspx



Status Under Review

Global Rank: G5
State Rank: SNR

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants with a short, branched rhizome covered with glossy, brown scales. Leaves clustered, dimorphic, 6–20 cm long with long, shiny petioles and lance-shaped to triangular blades. Sterile leaves parsley-like, 2 to 3 times pinnate with oblong pinnules. Fertile leaves longer, 2 to 3 times pinnate with leathery, linear pinnules. Fertile pinnules mucronate with a prominent midrib and pale indusia partly covering the sori from the margins (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry rock slides and crevices; montane to alpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Maidenhair Spleenwort - *Asplenium trichomanes*

http://FieldGuide.mt.gov/detail_PPASP021K0.aspx



Species of Concern

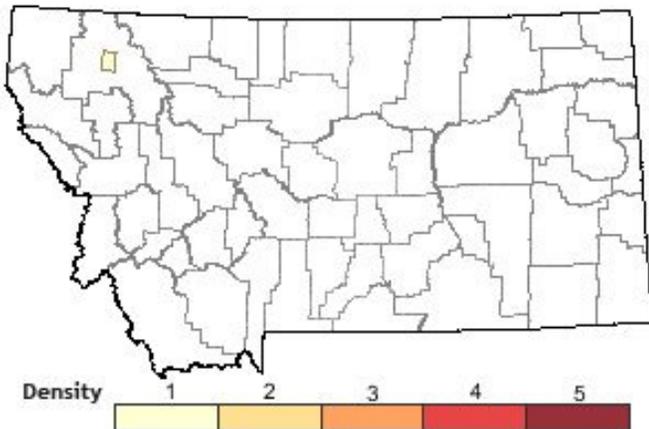
Global Rank: G5
State Rank: SH

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 1

General Description

Maidenhair Spleenwort is a perennial with short rhizomes and glabrous, evergreen fronds clustered from the base of the plant. Each frond is 7-35 cm long, and is pinnately divided into numerous pinnae that are arranged alternately on the shiny, reddish-brown central axis (rachis) of the frond. The naked petioles and central axes tend to persist after the pinnae have fallen; each pinna is 5 mm wide and entire-margined below, but shallowly lobed toward the tip. Spores are borne in 1-4 clusters arranged along the veins on the undersides of the pinnae; the spores are partially enfolded by a thin, white tissue, the indusium.

Habitat

Moist rock crevices and talus slopes in the montane zone.

Limestone Maidenhair Spleenwort - *Asplenium trichomanes-ramosum*

http://FieldGuide.mt.gov/detail_PPASP02250.aspx



Status Under Review

Global Rank: G4
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves 4–15 cm long with petioles green distally. Pinnae 6 to 20 pairs with dentate margins. Sori 4 to 8 per pinna (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet, limestone crevices; montane to alpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX.)

Alpine Ladyfern - *Athyrium alpestre*

http://FieldGuide.mt.gov/detail_PPDRY02010.aspx



Status Under Review

Global Rank: G4G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves ascending or erect, densely clustered or widely separated in talus, 15–70 cm long, petiole shorter than the blade. Leaf blade narrowly lance-shaped, twice pinnate. Sori borne at sinuses of pinnule lobes. Indusium absent (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Rock slides and stony soil of meadows, often along streams, less common in cliff crevices; subalpine to alpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Ladyfern - *Athyrium filix-femina*

http://FieldGuide.mt.gov/detail_PPDRY02020.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Leaves ascending or erect, 15–150 cm long, petiole much shorter than the blade. Leaf blade narrowly elliptic, twice pinnate. Sori borne between midvein and margin of pinnule. Indusium often curved with marginal hairs, opening along one edge, deciduous as spores mature (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forest, margins of meadows, along streams, avalanche slopes; valleys to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX.)

Pacific mosquitofern - *Azolla filiculoides*

http://FieldGuide.mt.gov/detail_PPAZOO1020.aspx



Global Rank: G5
State Rank: SNR

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Tiny, floating, mat-forming, aquatic annual. Stems tightly branched with simple roots. Leaves emersed, alternate, overlapping, sessile with 2 ovate lobes <1 mm long; upper lobe green or red, covered with white, flake-like hairs; lower lobe smaller and floating. Sporocarps dimorphic, obovoid, apparently in lower leaf axils; megasporocarps with 1 spore < 0.5 mm long; microsporocarps ca. 0.1 mm long with numerous spores clustered in small masses bearing hooked hairs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow water of ponds, sloughs; valleys (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Adnate Moonwort - *Botrychium adnatum*

http://FieldGuide.mt.gov/detail_PPOPH01210.aspx



Species of Concern

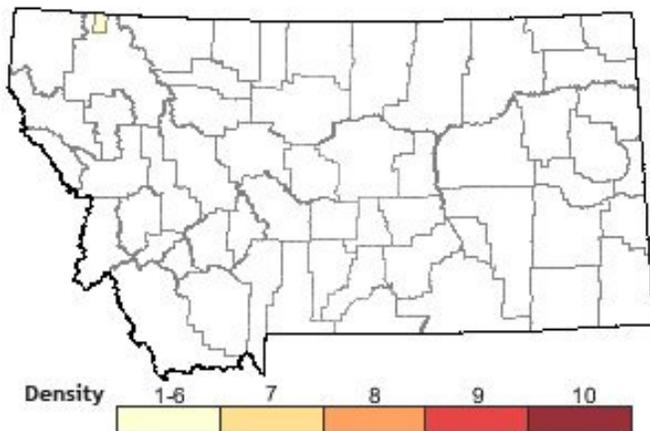
Global Rank: G1?
State Rank: S1S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 6

Habitat

Mesic fescue grasslands.

Upward-lobed Moonwort - *Botrychium ascendens*

http://FieldGuide.mt.gov/detail_PPOPH010S0.aspx



Species of Concern

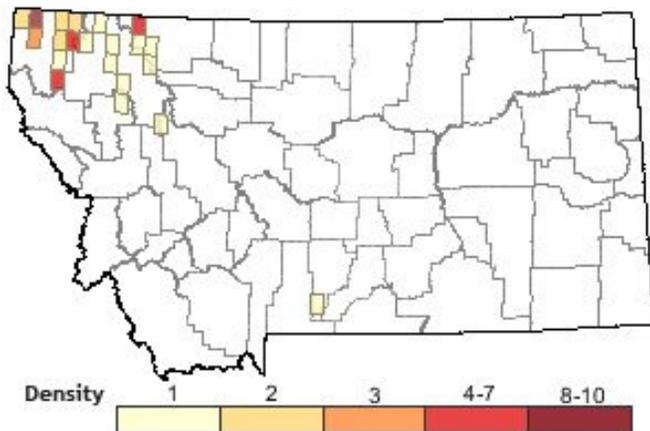
Global Rank: G3
State Rank: S3

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 54

General Description

Upward-lobed Moonwort is a small, perennial fern with a single aboveground frond. The frond is usually about 10 cm tall, yellow-green, and divided into two segments which share a common stalk. The mostly sterile segment is once pinnatifid with up to six pairs of strongly ascending, narrowly triangular pinnae which have deeply lacerate margins. The sterile segment often has a few sporangia on the margins of the pinnae or on small branches. The fertile segment is longer than the sterile segment, is branched, and bears grape-like sporangia. Spores germinate underground and develop into minute, subterranean, non-photosynthetic gametophytes which depend on an endophytic fungus for nourishment.

Habitat

Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats.

Prairie Moonwort - *Botrychium campestre*

http://FieldGuide.mt.gov/detail_PPOPH010W0.aspx



Species of Concern

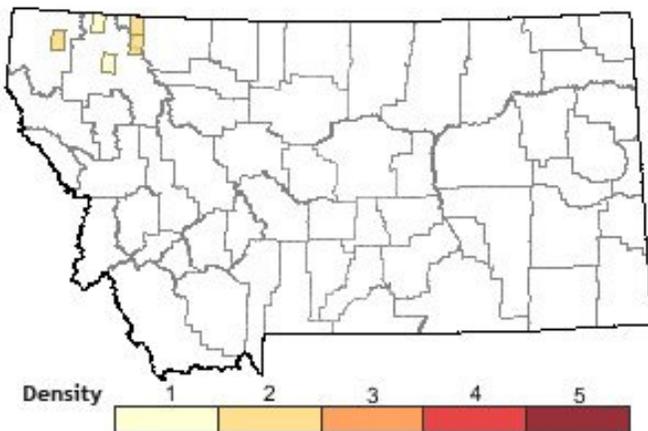
Global Rank: G3G4
State Rank: S1S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 8

General Description

Prairie Dunewort is a small perennial fern with a single aboveground frond which stands 6-12 cm tall. The frond is divided into two segments, one sterile, one fertile, which share a common stalk; the common stalk is usually 5-10 cm long. The sterile segment is dull, whitish-green, fleshy, usually widest above the middle, and with usually less than six pairs of widely spaced upswept pinnae. The pinnae are linear to spatula shaped; the largest are often bifid at the tip, with the upper division being larger than the lower. The fertile segment is stubby, about as long as or somewhat longer than the sterile segment, and is branched with fleshy, somewhat flattened branches bearing grape-like clusters of sporangia which contain thousands of spores. Spores germinate underground and develop into minute, subterranean, non-photosynthetic gametophytes.

Habitat

Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats. Common moonwort associates include *B. lunaria*, *B. lineare*, *B. crenulatum* and *B. ascendens*. Other moonworts reported at *B. campestre* sites include *B. paradoxum*, *B. minganense*, *B. pinnatum*, *B. spathulatum*, *B. yaaxudakeit* and *B. tunux*.

Wavy Moonwort - *Botrychium crenulatum*

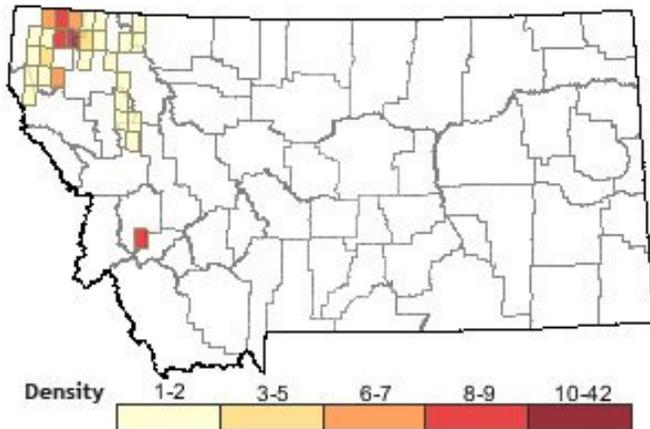
http://FieldGuide.mt.gov/detail_PPOPH010L0.aspx



Species of Concern

Global Rank: G3
State Rank: S3

AGENCY STATUS
USFWS:
USFS: SENSITIVE
BLM:



Number of Observations: 139

General Description

Wavy Moonwort is a small, perennial fern with a single aboveground frond. The frond is usually 10 cm or less tall, yellow-green, and divided into two segments which share a common stalk. The mostly sterile segment is once pinnatifid with usually three or four well separated pairs of thin textured, broadly fan-shaped pinnae which have distinct veins and crenulate margins. The fertile segment is longer than the sterile segment, is branched (often like a tiny Christmas tree), and bears grape-like sporangia. Spores germinate underground and develop into minute, subterranean, non-photosynthetic gametophytes which depend on an endophytic fungus for nourishment.

Habitat

Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats. Sites may be partially shaded or open.

Frenchman's Bluff Moonwort - *Botrychium gallicomontanum*

http://FieldGuide.mt.gov/detail_PPOPH01150.aspx



Species of Concern

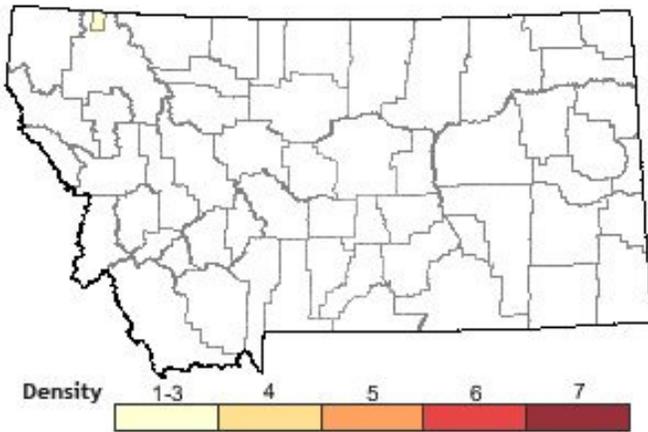
Global Rank: G1G2
State Rank: S1S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 3

Habitat

Fescue grasslands. Farrar (unpublished) indicates that its occurrence in MT and SD is in areas of high diversity in prairies.

Western Moonwort - *Botrychium hesperium*

http://FieldGuide.mt.gov/detail_PPOPH010Q0.aspx



Species of Concern

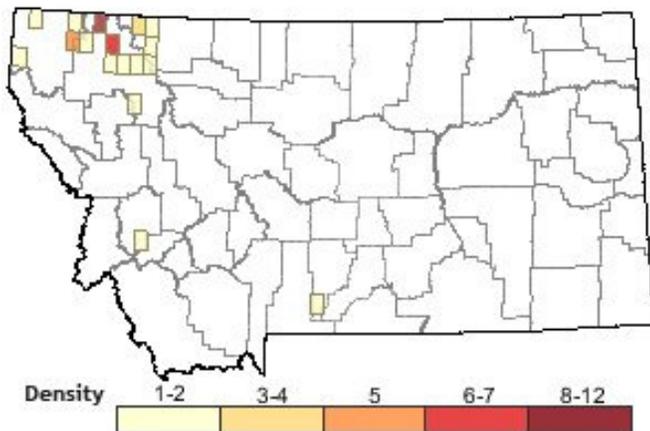
Global Rank: G4
State Rank: S3

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 46

General Description

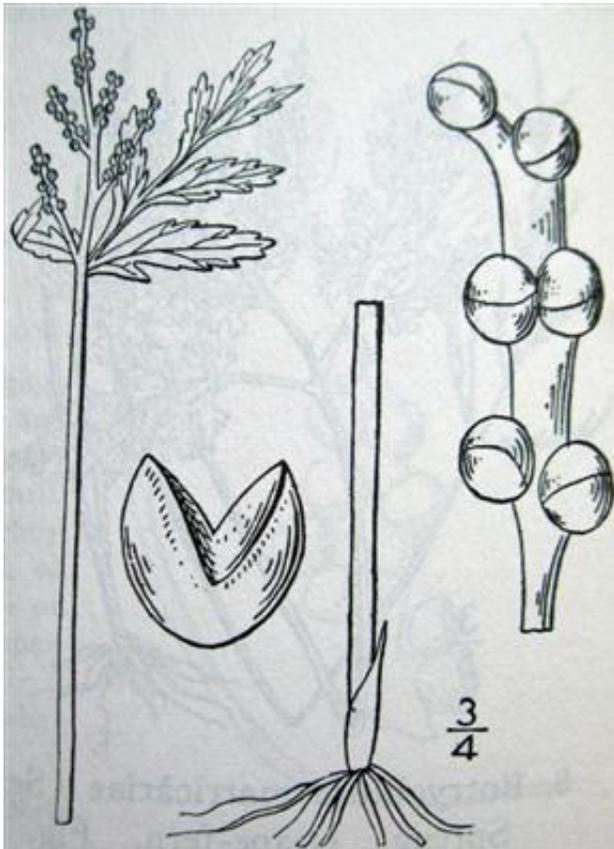
Western Moonwort is a small perennial fern with a single erect frond, 3-13 cm high. It is divided into a sterile segment and a fertile segment. The sterile segment has a stalk 0-4 mm long, and a broadly lance-shaped to triangular blade that is pinnately divided with 1-6 pairs of closely adjacent leaflets (pinnae). The basal pinnae are usually partly to wholly pinnately divided and are larger than the lobed or entire-margined upper pinnae. The fertile segment is 2-3 times as long as the sterile segment and 1-3 times pinnately divided into linear segments that bear the spores.

Habitat

Various dry to mesic sites from valley bottoms to the subalpine, including roadsides and other disturbed habitats. Common moonwort associates include *B. paradoxum*, *B. lunaria* and *B. lanceolatum*. Other moonworts reported at *B. hesperium* sites include *B. minganense*, *B. adnatum*, *B. pedunculosum*, *B. ascendens*, *B. lineare*, *B. gallicomontanum*, *B. pinnatum*, *B. crenulatum*, *B. simplex* and *B. pallidum*.

Lanceleaf Moonwort - *Botrychium lanceolatum*

http://FieldGuide.mt.gov/detail_PPOPH01070.aspx



Species of Concern

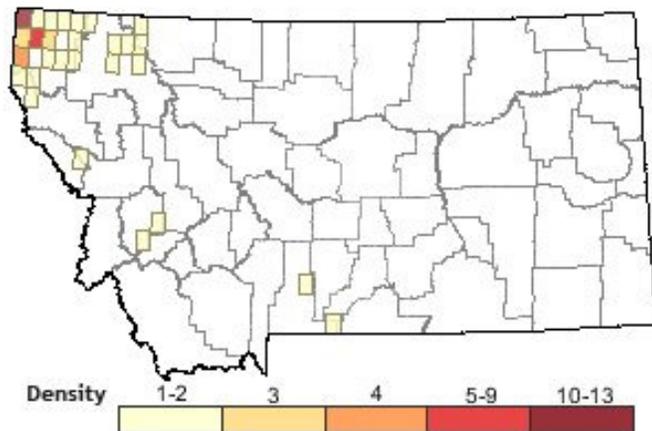
Global Rank: G5
State Rank: S3

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 61

General Description

Plants 5–15 cm. Trophophore dark green to yellow-green, triangular, up to 5 cm long, with 1 to 3 pairs of lobed pinnae; the pinnae ascending and not overlapping. Sporophore 1 to 3 times pinnate, 1 to 2.5 times as long as trophophore. According to Farrar (unpublished) our plants are subspecies *lanceolatum*, although Lesica (2012) indicates that subspecies *lanceolatum* and the putatively eastern subspecies *angustisegmentum* are difficult to separate (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX; Donald Farrar (Iowa State University; unpublished manuscript)).

Habitat

In a variety of habitats from wet to moist, grassy and rocky slopes, meadows, woods, roadsides, and edges of lakes, generally at fairly high elevations.

Linearleaf Moonwort - *Botrychium lineare*

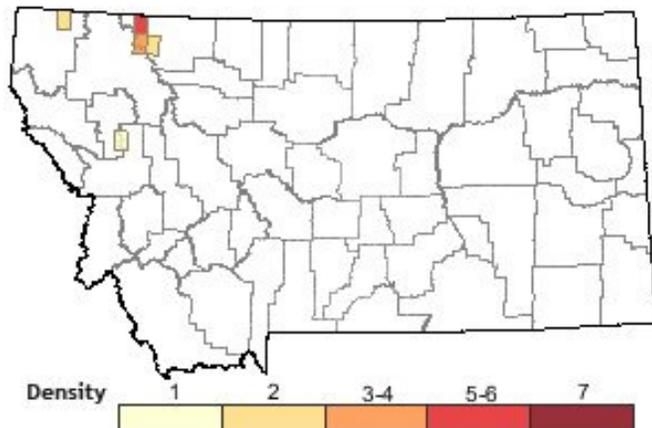
http://FieldGuide.mt.gov/detail_PPOPH01120.aspx



Species of Concern

Global Rank: G2?
State Rank: S1S2

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 15

General Description

Linearleaf Moonwort is a small, perennial fern with a single pale green, above-ground frond which stands 6-18 cm tall. The frond is divided into two segments, one sterile, one fertile, which share a common stalk. The sterile segment is once-pinnate (with segments, or pinnae borne on each side of an elongated central axis) with 4-6 widely spaced pairs of pinnae which are linear shaped or sometimes bifid with linear lobes. The fertile segment is 1-2 times as long as the sterile segment and has a single major axis with short branches which bear grape-like sporangia which contain thousands of spores. Spores germinate underground and develop into minute, subterranean, non-photosynthetic gametophytes.

Habitat

Botrychium lineare is an early- to mid-succession species that has been found throughout its range in a wide variety of habitats. These include mid-height grasslands, grazed rangelands, a limestone shelf on a steep slope, a woodland trail, roadside gravels and in grass under conifers. Montana populations, with the exception of the historic Mission Mountain site in Lake County, which was found along a steep woodland trail, were all found along roadways in gravelly shoulders created during road construction. Most of the associated vegetation is low, allowing ample direct sunlight for much of the day.

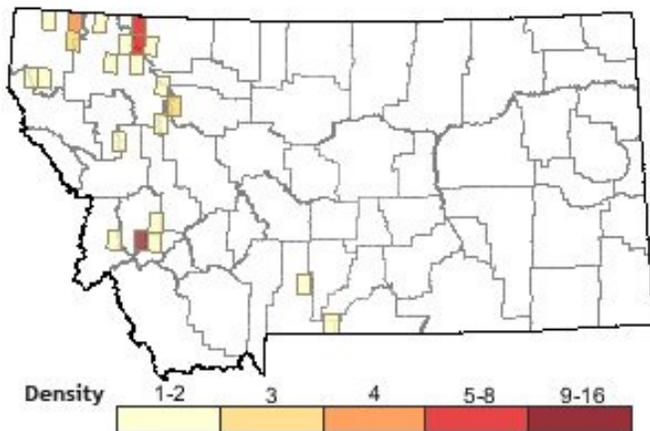
Common Moonwort - *Botrychium lunaria*

http://FieldGuide.mt.gov/detail_PPOPH01080.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 60

General Description

Moonwort is a very small, perennial fern with a single aboveground frond. The dark-green frond is usually about 4 inches long and can be seen through mid-summer. It is divided into two leaves above a common stalk. The sterile leaf is usually dark green, thick, and fleshy. It has up to 9 usually overlapping pairs of broadly fan-shaped leaflets (pinnae). The top edges are rounded and smooth or wavy or rarely have teeth. The fertile leaf is longer than the sterile leaf with branches that bear grape-like sporangia. Spores germinate underground and develop into tiny, non-photosynthetic gametophytes which depend on an fungus for nourishment. Our plants are variety *crenulatum* (Donald Farrar; Iowa State Univeristy, unpublished).

Habitat

Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats. Sites are generally open with montane meadows and grasslands being the most common habitats occupied by the species.

Michigan Moonwort - *Botrychium michiganense*

http://FieldGuide.mt.gov/detail_PPOPH01200.aspx



Species of Concern

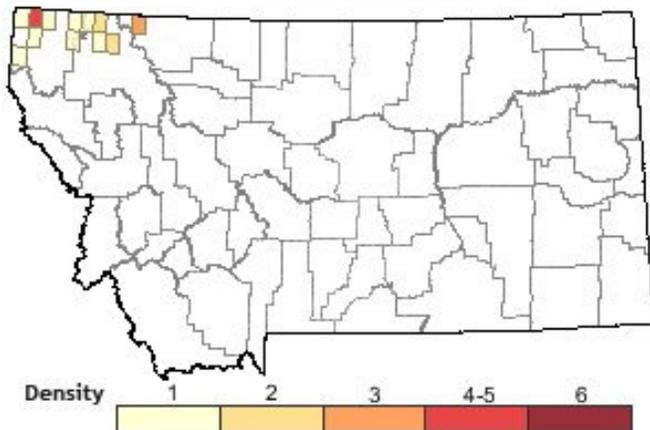
Global Rank: G3
State Rank: S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 20

Habitat

Various mesic habitat, including mesic grasslands and meadows, roadsides and moist forest bottoms.

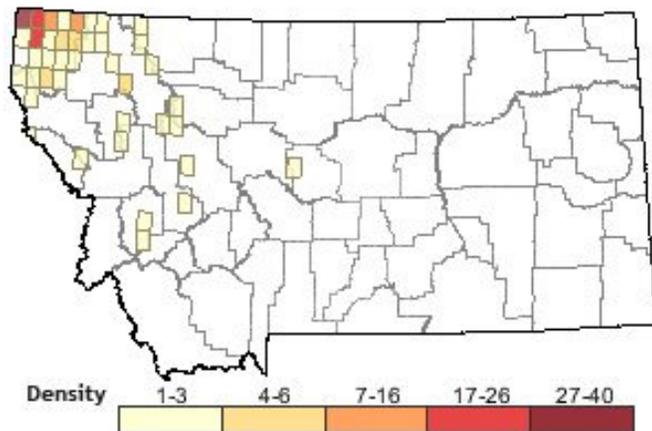
Mingan Island Moonwort - *Botrychium minganense*

http://FieldGuide.mt.gov/detail_PPOPH010R0.aspx



Global Rank: G4G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 249

General Description

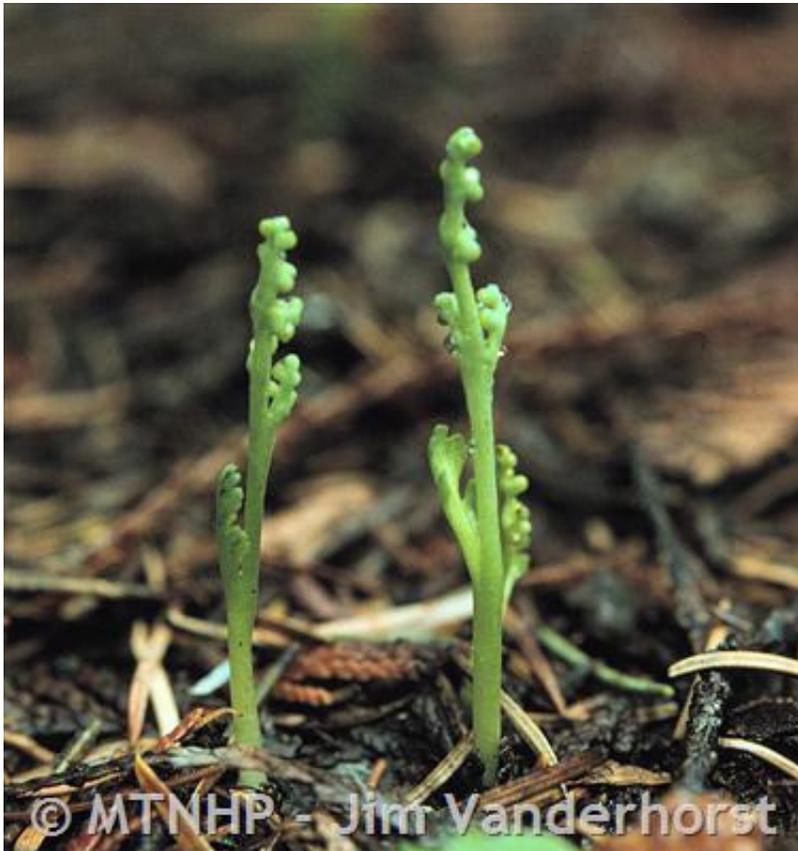
Mingan Island Moonwort is a small perennial fern with a single aboveground frond. The frond varies in height, but may reach about 20 cm. It is divided into two segments which share a common stalk, and it is usually a deep, dull green and somewhat fleshy. The sterile segment is once pinnatifid with up to 10 usually well separated pairs of pinnae. The pinnae are variable; they are generally narrowly fan-shaped with rounded, entire margined apices, but can be broader and may be lobed or have incised margins. The fertile segment is longer than the sterile segment, is branched, and bears grape-like sporangia. Spores germinate underground and develop into minute subterranean, non-photosynthetic gametophytes which depend on an endophytic fungus for nourishment.

Habitat

A broad variety of habitats including grasslands, old growth and second growth deciduous and coniferous forests, and riparian zones. In northwest MT it is usually found at hydrological microfeatures, such as seepy draws, benches, stream bottoms, and wetland edges in maturing to old growth stands of western red cedar.

Mountain Moonwort - *Botrychium montanum*

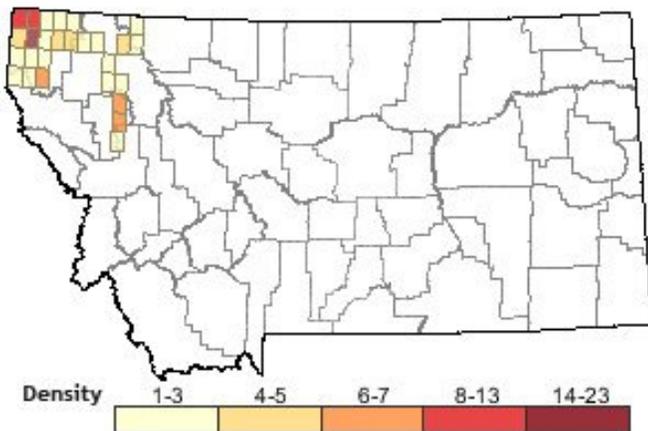
http://FieldGuide.mt.gov/detail_PPOPH010K0.aspx



Potential Species of Concern

Global Rank: G3
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 143

General Description

Mountain Moonwort is a small perennial fern with a single aboveground frond. The frond varies in height but may reach a height of 12 cm. It is a dull, glaucous gray-green, somewhat succulent, and divided into two segments which share a relatively short common stalk. The sterile segment is once pinnatifid with well separated, irregular, angular, ascending lobes with entire or toothed margins. The fertile segment is longer than the sterile segment, is branched, and bears grape-like sporangia. Spores germinate underground and develop into minute subterranean, non-photosynthetic gametophytes which depend on an endophytic fungus for nourishment.

Habitat

Usually in deep litter of springy, mature western red cedar forests, but also in riparian thickets, mesic meadows, and grassy trail edges.

Leathery Grape-fern - *Botrychium multifidum*

http://FieldGuide.mt.gov/detail_PPOPH010B0.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants 10–45 cm. Trophophore shiny green, leathery, evergreen, 4–40 cm long, wider than long with up to 10 pairs of 1 to 2 times pinnate, overlapping pinnae. Sporophore 2 to 3 times pinnate, 1 to 2 times longer than trophophore (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist or wet, organic soils of meadows, forests; valleys, montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Pale Moonwort - *Botrychium pallidum*

http://FieldGuide.mt.gov/detail_PPOPH01130.aspx



Species of Concern

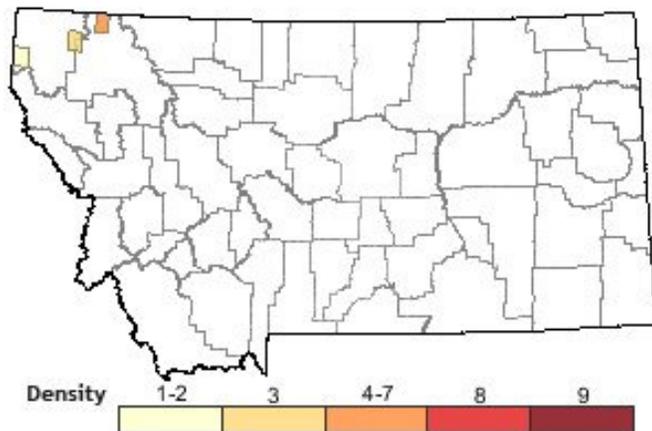
Global Rank: G3
State Rank: S1S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 12

General Description

Pale Moonwort is a perennial with a single aboveground frond less than 10 cm tall, with a pale whitish green color, and divided into two segments that share a common stalk. The sterile segment is once pinnatifid and has up to 5 pairs of fan-shaped pinnae, 2-3 mm long, with concave sides. The sterile segment is shaped like a trough along the central axis. The fertile segment is longer than the sterile segment, branched, and bears grape-like sporangia. Spores germinate underground and develop into subterranean gametophytes.

Habitat

Typically occurs in fescue grasslands in the valley zone, though may also be found in other open, mesic habitats. Common moonwort associates include *B. hesperium*, *B. paradoxum*, *B. simplex* and *B. gallicomontanum*. Other moonworts reported at *B. pallidum* sites include *B. minganense*, *B. adnatum*, *B. pedunculosum*, *B. ascendens*, *B. lanceolatum*, *B. lunaria*, *B. crenulatum* and *B. michiganense*.

Peculiar Moonwort - *Botrychium paradoxum*

http://FieldGuide.mt.gov/detail_PPOPH010J0.aspx



Species of Concern

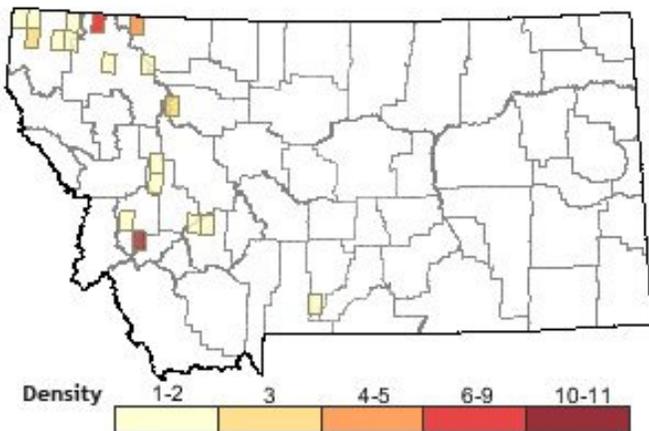
Global Rank: G3G4
State Rank: S3

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM: SENSITIVE



Number of Observations: 48

General Description

Peculiar moonwort is a small perennial fern with a single above ground frond. The frond varies in height up to about 15 cm tall, is glaucous green, somewhat succulent, and divided into two similar segments which share a common stalk. The segments may be unbranched in small plants or branched in larger plants and are both fertile and bear grape-like sporangia. Spores germinate underground and develop into minute, subterranean, non-photosynthetic gametophytes which depend on an endophytic fungus for nourishment.

Habitat

Mesic meadows associated with spruce and lodgepole pine forests in the montane and subalpine zones; also found in springy western red cedar forests.

Stalked Moonwort - *Botrychium pedunculatum*

http://FieldGuide.mt.gov/detail_PPOPH010T0.aspx



Species of Concern

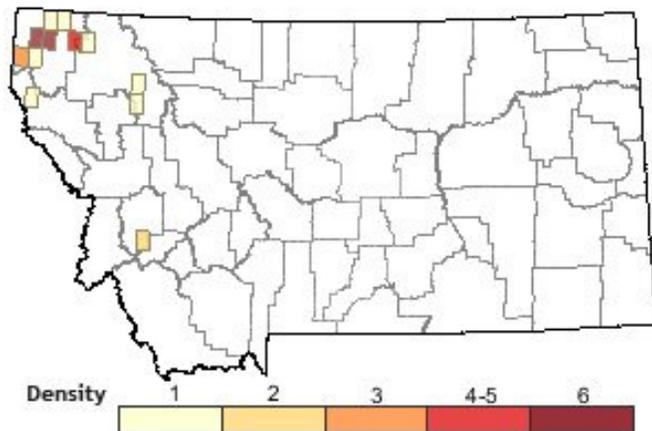
Global Rank: G2G3
State Rank: S2

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 29

General Description

Stalked moonwort is a perennial with a single above ground frond up to 20 cm tall. It is divided into two segments that share a common stalk. The lower common stalk is usually reddish brown and the upper part of the plant is a dull green. The mostly sterile segment is conspicuously stalked and once to twice pinnatifid with up to five pairs of primary pinnae. The pinnae have irregular lobes and vary from pinnatifid to bifid to narrowly fan shaped and the lower ones often bear sporangia. The fertile segment is longer than the sterile segment and bears grape-like sporangia that contain thousands of spores; larger plants usually have two large ascending lateral branches.

Habitat

Various mesic sites from valley bottoms to the montane zone. The most common habitats are western redcedar bottomlands. Common moonwort associates include *B. minganense*, *B. lanceolatum* and *B. montanum*. Other moonworts reported at *B. pedunculatum* sites include *B. paradoxum*, *B. ascendens*, *B. pinnatum*, *B. pallidum*, *B. lunaria*, *B. hesperium*, *B. simplex*, *B. crenulatum* and *B. michiganense*.

Northern Moonwort - *Botrychium pinnatum*

http://FieldGuide.mt.gov/detail_PPOPH010V0.aspx



Species of Concern

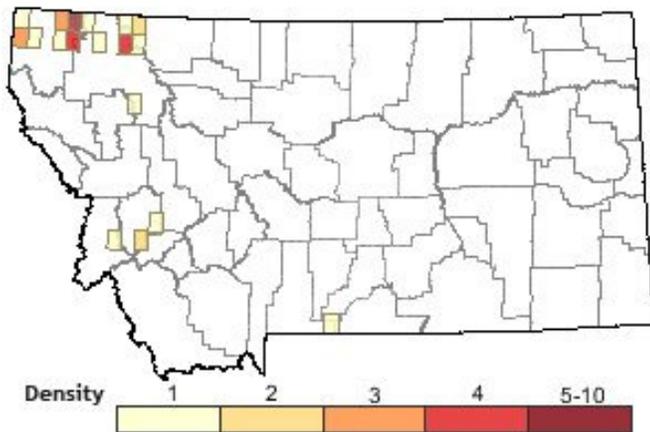
Global Rank: G4?
State Rank: S3

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 39

General Description

Plants 5–20 cm. Trophophore green, lanceolate, up to 8 cm long with up to 7 pairs of pinnae; at least the lowest pairs deeply lobed and nearly overlapping the ones above. Sporophore 2 times pinnate; 1 to 2 times as long as trophophore (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wide variety of habitats, including wet to moist grassy slopes, streambanks, roadsides, and mossy woods, generally in the mountains. In Idaho and Oregon, found in shaded cedar forest.

Least Moonwort - *Botrychium simplex*

http://FieldGuide.mt.gov/detail_PPOPH010E0.aspx



Species of Concern

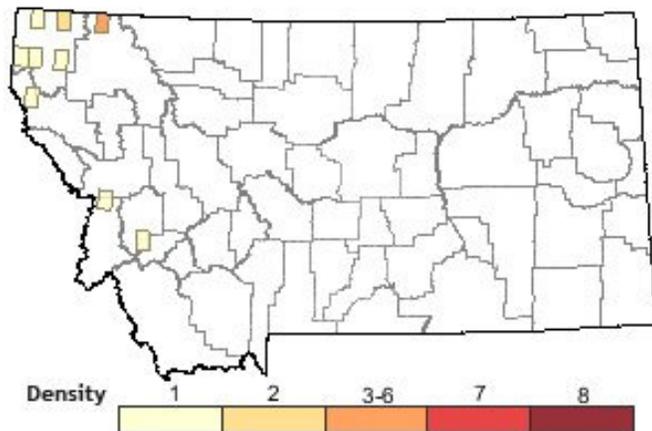
Global Rank: G5
State Rank: S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 15

General Description

Trophophore light green, lanceolate, to 5 cm long with up to 7 pairs of ascending, fan-shaped pinnae with wavy margins; the lowest often deeply divided and overlapping the ones above. Sporophore 1 to 2 times pinnate, 1 to 8 times length of trophophore (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Various mesic sites from low to moderate elevations, including roadsides and other disturbed habitats. Sites are generally open with montane meadows and grasslands being the most common habitats occupied by the species.

Moonworts - *Botrychium sp. (Non-SOC)*

http://FieldGuide.mt.gov/detail_PPOPH01001.aspx



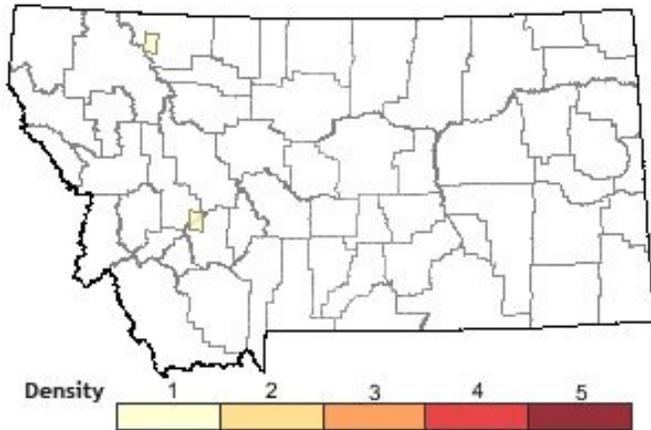
Global Rank: GNR
State Rank: SNR

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 2

Moonworts - *Botrychium sp.* (SOC)

http://FieldGuide.mt.gov/detail_PPOPH01000.aspx



Species of Concern

Global Rank: G1G3
State Rank: S1S3

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

Spoon-leaf Moonwort - *Botrychium spathulatum*

http://FieldGuide.mt.gov/detail_PPOPH01140.aspx

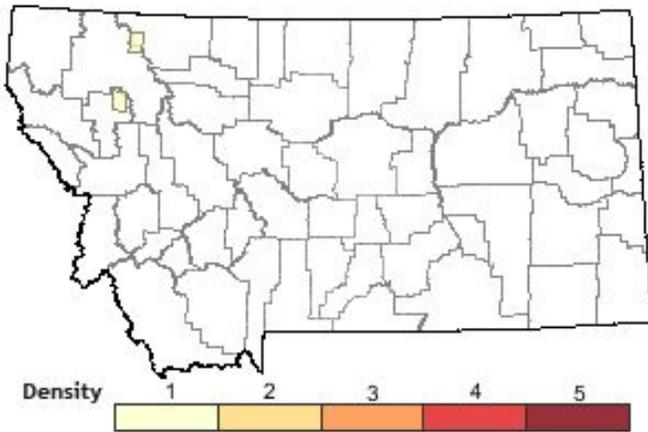


Species of Concern

Global Rank: G3
State Rank: S1

AGENCY STATUS

USFWS:
USFS:
BLM:



Number of Observations: 2

General Description

Spoon-leaf Moonwort produces a single erect frond, up to 12 cm high, that is divided into a trophophore and a sporophore. The trophophore has a stalk, less than 1 mm long, and a narrowly triangular blade that is pinnately divided into 2-8 pairs of spoon-shaped, widely spaced, entire to lobed pinnae. The sporophore is 1-2 times the length of the trophophore and 1-2 times pinnately divided into linear segments that bear the spores.

Habitat

Meadows and open forests, often in areas of moderate disturbance or sparsely vegetated soil in the valley and montane zones.

Moosewort - *Botrychium tunux*

http://FieldGuide.mt.gov/detail_PPOPH01240.aspx



Species of Concern

Global Rank: G3?
State Rank: S1

AGENCY STATUS

USFWS:
USFS:
BLM:

Number of Observations: 0

Rattlesnake Fern - *Botrychium virginianum*

http://FieldGuide.mt.gov/detail_PPOPH010H0.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants 10–45 cm. Trophophore sessile, deltoid, pale green, thin, up to 25 cm long with up to 10 pairs of nearly overlapping pinnae, the basal pairs twice pinnate, the apical merely lobed. Sporophore twice pinnate, shorter than to twice the length of trophophore (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry to moist forests, woodlands, often near water bodies; valleys, montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

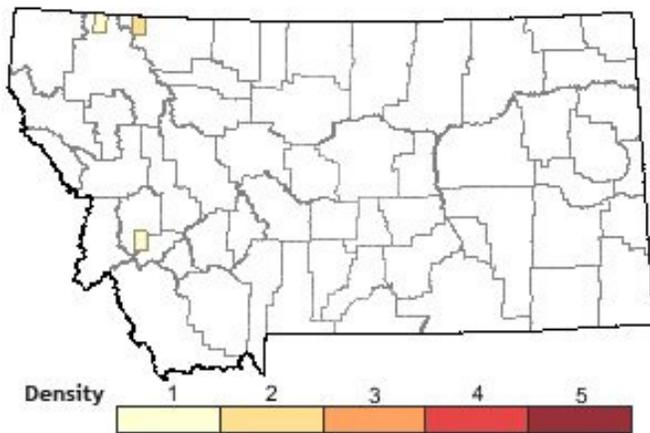
Waterton Moonwort - *Botrychium x watertonense*

http://FieldGuide.mt.gov/detail_PPOPH01160.aspx



Global Rank: GNA
State Rank: SNA

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 4

Yakutat Moonwort - *Botrychium yaaxudakeit*

http://FieldGuide.mt.gov/detail_PPOPH01180.aspx



Species of Concern

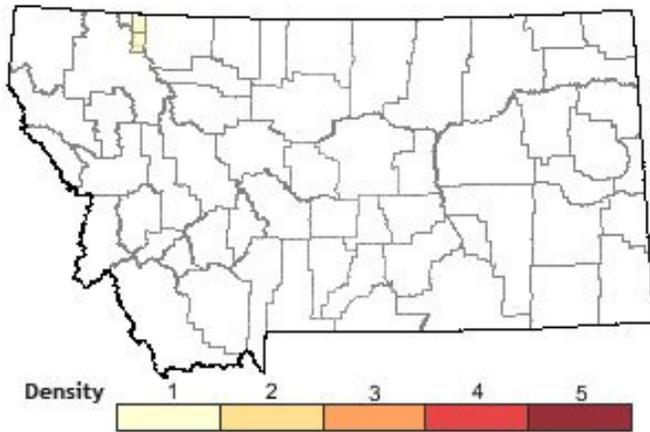
Global Rank: G3G4
State Rank: S1

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 2

Habitat

Various open, mesic habitats.

Fee's Lipfern - *Cheilanthes feei*

http://FieldGuide.mt.gov/detail_PPADI09080.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves 4–20 cm long. Leaf blade subtripinnate at the base with 6 to 12 pairs of pinnae; the rachis hairy but without scales. Pinnules oblong to lanceolate, densely white- to brown-villous below (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry crevices of limestone cliff crevices; valleys to alpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Lace Lipfern - *Cheilanthes gracillima*

http://FieldGuide.mt.gov/detail_PPADI090B0.aspx



Status Under Review

Global Rank: G4G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves 5–20 cm long. Leaf blade 2 to 3 times pinnate with 9 to 20 pairs of pinnae, the rachis with narrow dark scales. Pinnules oblong, nearly glabrous above but covered with hair and narrow brown scales below (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry to moist rock crevices and steep talus slopes; montane to near treeline (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

American Rockbrake - *Cryptogramma acrostichoides*

http://FieldGuide.mt.gov/detail_PPADI0B030.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Rhizome short, covered with old leaf bases. Sterile leaves 4–25 cm long, petiole ca. half the length, blades 2 to 3 times pinnate, leathery, parsley-like, ultimate lobes elliptic. Pinnules with some secondary veins ending in sunken, white hydathodes. Fertile leaves up to 30 cm long, mostly twice pinnate, pinnules linear with yellowish margins rolled under and often meeting in the center before they split at maturity (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow soil of rock outcrops, rock slides, less common on wet cliffs; at all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Cascade Rockbrake - *Cryptogramma cascadiensis*

http://FieldGuide.mt.gov/detail_PPADI0B040.aspx



Status Under Review

Global Rank: G5
State Rank: S1S2

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Sterile leaves 5–15 cm long, glabrous above, thin and transparent when dry. Pinnules without hydathodes. Fertile leaves up to 20 cm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Rock slides and near boulders; subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Fragile Rockbrake - *Cryptogramma stelleri*

http://FieldGuide.mt.gov/detail_PPADI0B020.aspx



Number of Observations: 0

General Description

Rhizome long and slender, easily broken. Leaves well separated. Sterile leaves 5–15 cm long; petiole ca. half that length; the blade mostly twice pinnate with lobed or toothed, ovate pinnules. Fertile leaves at least half again as long as sterile ones, mostly twice pinnate, pinnules narrowly lanceolate to linear (lobed) with pale margins rolled under but reflexed at the edge (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Vernally wet crevices of cliffs and outcrops among moss and other ferns, more common on limestone; montane to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS:

BLM:

Brittle Bladder Fern - *Cystopteris fragilis*

http://FieldGuide.mt.gov/detail_PPDRY07030.aspx



Global Rank: G5
State Rank: S4S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

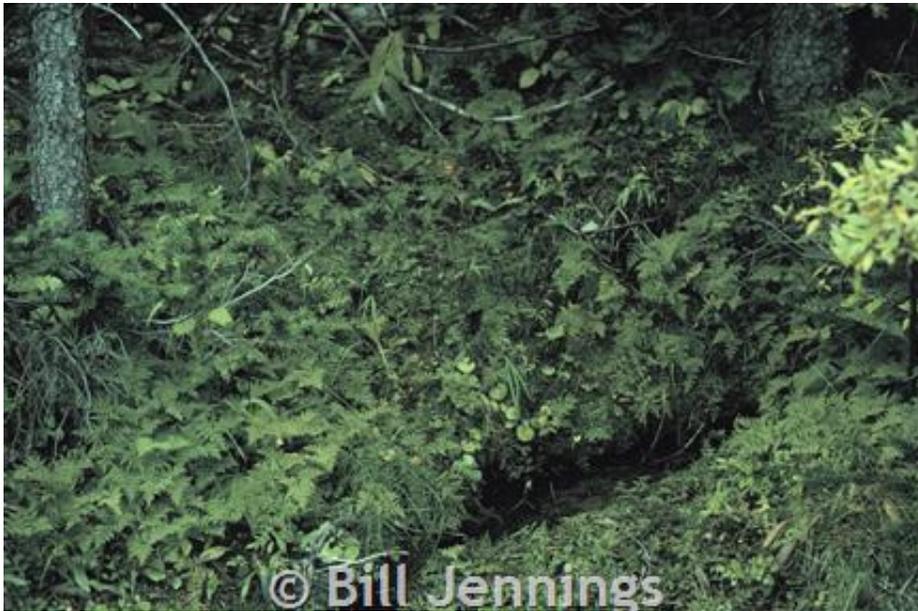
Leaves loosely clustered, glabrous or slightly glandular, 4–35 cm long, petiole shorter to slightly longer than the blade. Leaf blades narrowly elliptic to lanceolate, twice pinnate below. Pinnules deeply lobed with toothed margins. Indusium without glandular hairs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry to wet, shallow or stony soil, rock crevices on open slopes, forests, woodlands; all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Mountain Bladder Fern - *Cystopteris montana*

http://FieldGuide.mt.gov/detail_PPDRY07050.aspx

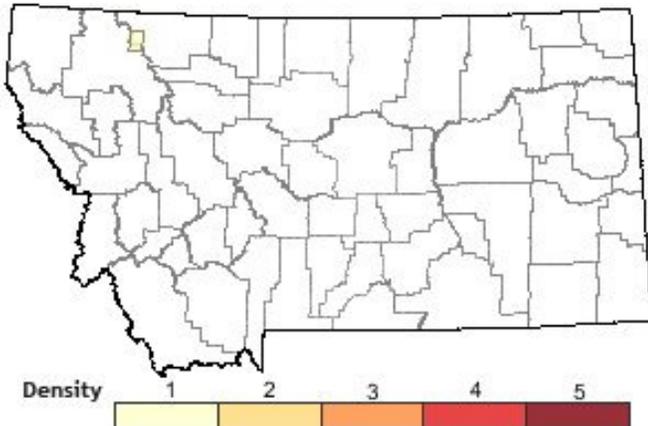


Species of Concern

Global Rank: G5
State Rank: SH

AGENCY STATUS

USFWS:
USFS:
BLM:



Number of Observations: 1

General Description

Mountain Bladder Fern has delicate fronds arising singly from dark, cord-like, creeping rhizomes. The black, sparsely scaly petioles, 6-30 cm long, are longer than the triangular blades, which are 6-14 cm long and wide. The blade is pinnately divided into numerous pairs of leaflets, which become smaller towards the tip. The lower leaflets are again 2-3 times pinnately divided, while the upper leaflets are only pinnately lobed. The first downward pointing division of each of the 2 lowest leaflets is noticeably longer than the paired upward pointing divisions. Clusters of spores, or sori, are borne on veins just in from the edges on the undersides of the blades. Each sorus is partially contained in a whitish membranous pocket, or indusium.

Habitat

Moist rock ledges near or above timberline.

Spinulose Shieldfern - *Dryopteris carthusiana*

http://FieldGuide.mt.gov/detail_PPDRY0A040.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves monomorphic, 15–75 cm long, petiole shorter than blade with tan scales toward the base. Leaf blade light green, ovate, non-glandular, twice pinnate at the base. Pinnules deeply pinnately lobed or toothed; downward pointing longer than those pointing upward on lower pinnae. Indusium lacking glands (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shady, mesic forests, often with western red cedar or hemlock; montane, subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Crested Shieldfern - *Dryopteris cristata*

http://FieldGuide.mt.gov/detail_PPDRY0A090.aspx

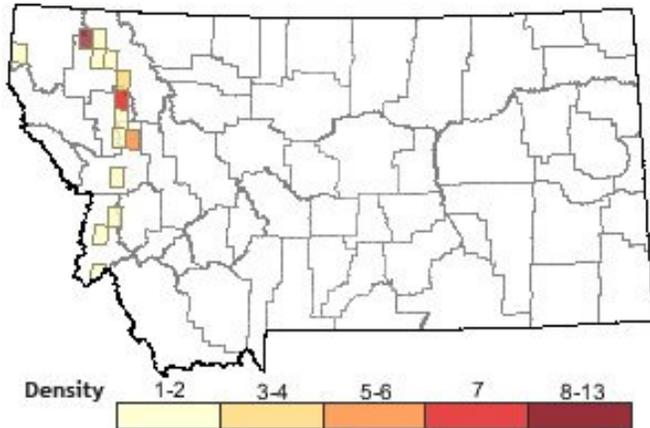


Species of Concern

Global Rank: G5
State Rank: S3

AGENCY STATUS

USFWS:
USFS: SENSITIVE
BLM:



Number of Observations: 43

General Description

Crested Shieldfern is an herbaceous perennial with clustered fronds arising from a short rhizome. The stalked fronds have narrowly elliptic blades pinnately divided into numerous pairs of pinnately lobed leaflets, or pinnae. The fertile fronds, 3-6 dm long, are erect and deciduous, while the sterile ones are evergreen, smaller, and more lax. Clusters of spores, or sori are borne along either side of the pinnae midveins on the underside of fertile fronds. Sori are covered by a whitish, broadly horseshoe-shaped membrane, or indusium.

Habitat

Moist to wet, often organic soils at the forest margins of fens and swamps in the montane zone.

Spreading Woodfern - *Dryopteris expansa*

http://FieldGuide.mt.gov/detail_PPDRY0A0A0.aspx



Status Under Review

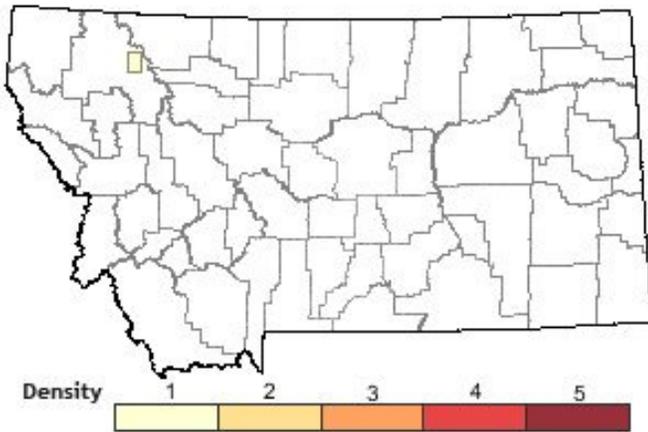
Global Rank: G5
State Rank: S3?

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 1

General Description

Leaves monomorphic, up to 90 cm long; petiole ca. 1/2 as long as blade. Leaf blade green, narrowly triangular, twice pinnate, glandular or not. Pinnules deeply pinnately lobed, downward pointing ones on lower pinnae longer than those pointing upward. Indusium with or without glands (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Mesic, shady forests, often along streams and beneath shrubs; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Male Fern - *Dryopteris filix-mas*

http://FieldGuide.mt.gov/detail_PPDRY0A0B0.aspx



Global Rank: G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Male fern Leaves monomorphic, 15–100 cm long, petiole =1/3 length of blade. Leaf blade narrowly elliptic, green, twice pinnate at the base, not glandular. Pinnules downward- and upward-pointing ones ca. equal. Indusium lacking glands (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Mesic forests and in moist to wet rock crevices, often along streams and beneath tall shrubs; montane to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Field Horsetail - *Equisetum arvense*

http://FieldGuide.mt.gov/detail_PPEQU01010.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

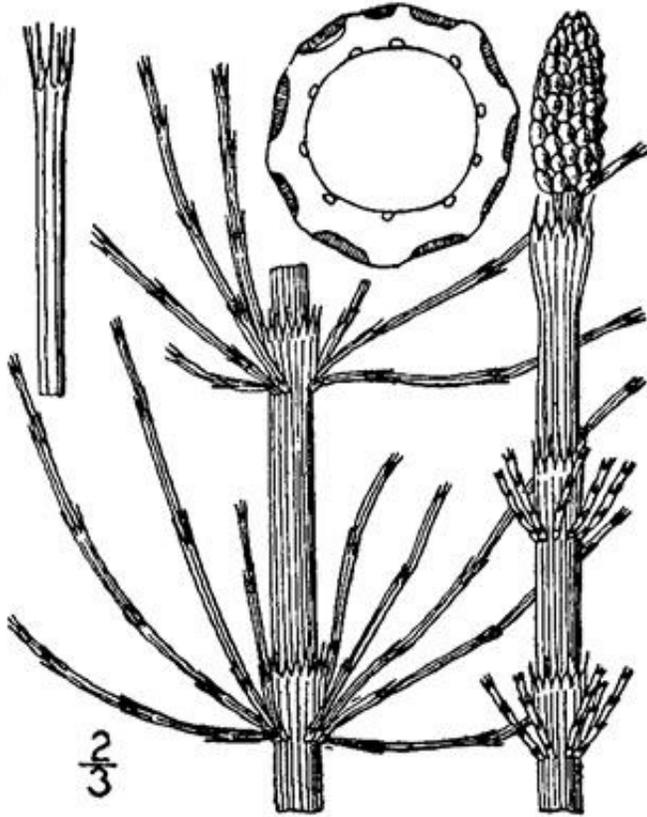
Sterile stems annual, dimorphic, 5–70 cm × 1–5 mm with 10 to 12 ridges, hollow, green. Sheaths green with dark teeth. Branches usually ascending; first internode longer than subtending stem sheath. Fertile stems tan, unbranched, shorter than sterile stems, usually apparent only in spring. Strobili 5–40 mm long, blunt (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet soil of meadows, forests, stream banks, lake shores at all elevations. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Water Horsetail - *Equisetum fluviatile*

http://FieldGuide.mt.gov/detail_PPEQU01020.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

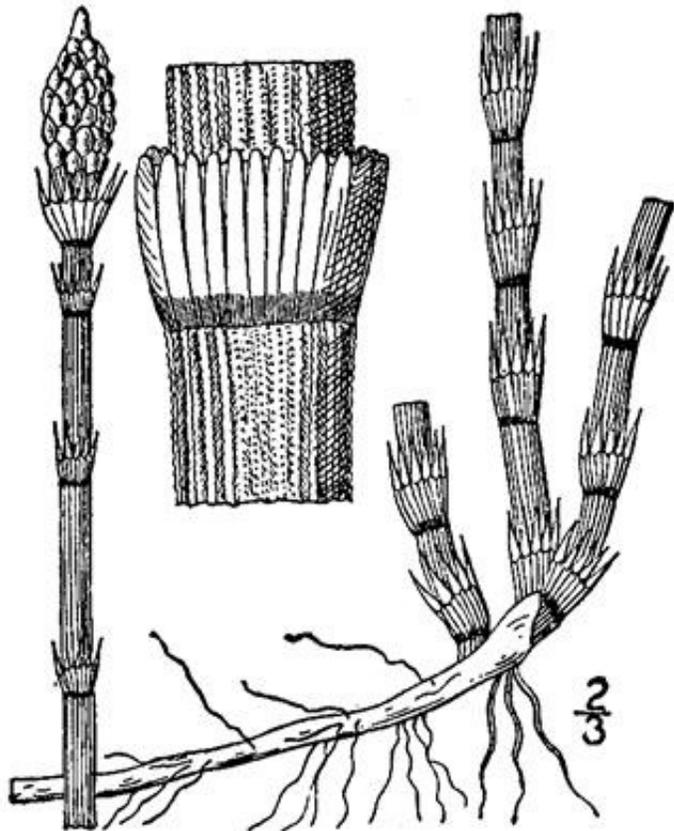
Stems annual, monomorphic, hollow, branched or not, with 9 to 25 ridges, up to 1 m long, 2–8 mm wide. Sheaths green with black teeth. Branches with first internode shorter than subtending stem sheath. Strobili blunt, 5–30 mm long, maturing in summer. Unbranched plants resemble *Equisetum laevigatum* but the sheath teeth are not broken off (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow water of ponds, lakes, sloughs, marshes, fens; plains, valleys to montane. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Rough Horsetail - *Equisetum hyemale*

http://FieldGuide.mt.gov/detail_PPEQU01030.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

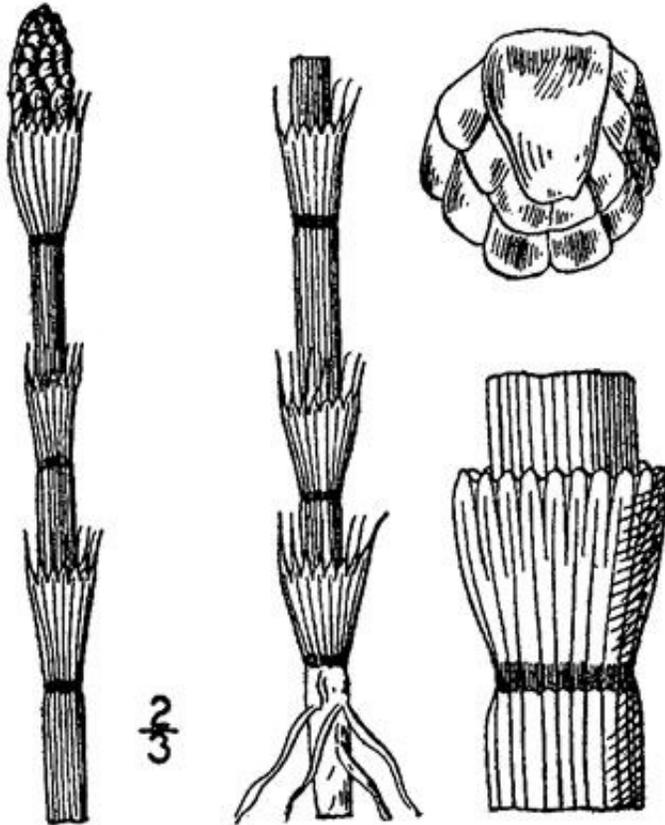
Stems monomorphic, hollow, leathery, dark green, evergreen, unbranched, 18–100 cm × 4–10 mm with 14 to 40 ridges. Sheaths green becoming gray with a black lower band and black, deciduous teeth. Strobili 5–25 mm long with sharp-pointed tips, maturing in summer (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist grasslands, meadows, aspen groves, streambanks; plains, valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Smooth Scouring-rush - *Equisetum laevigatum*

http://FieldGuide.mt.gov/detail_PPEQU01040.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

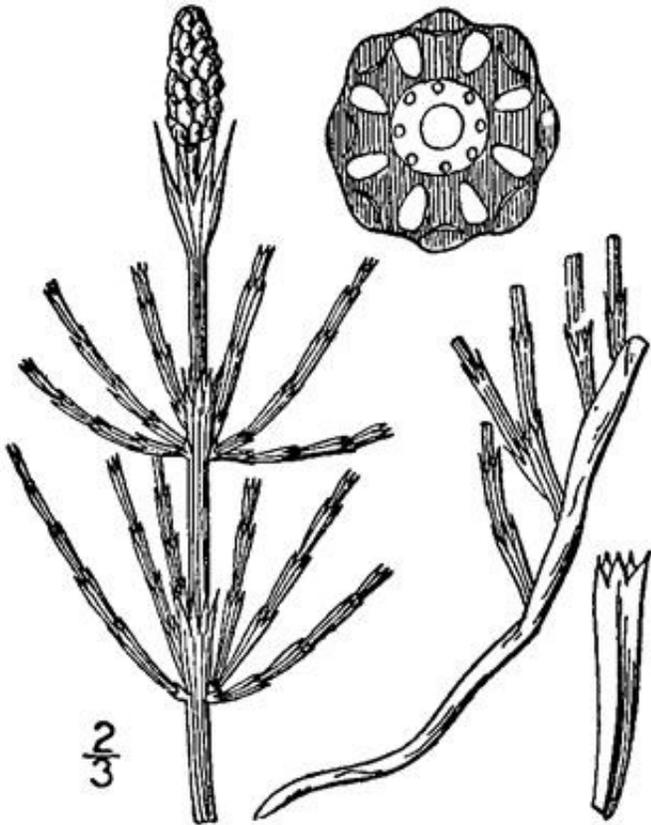
Stems monomorphic, hollow, usually unbranched, annual, 20–100 cm × 2–8 mm with 10 to 32 ridges. Sheaths green with a terminal black band, the black teeth quickly deciduous. Strobili 10–20 mm, usually blunt. Stems are lighter green and less leathery than those of *Equisetum hyemale* (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist grasslands, woodlands, vernaly inundated depressions, roadsides; plains, valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Marsh Horsetail - *Equisetum palustre*

http://FieldGuide.mt.gov/detail_PPEQU01050.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

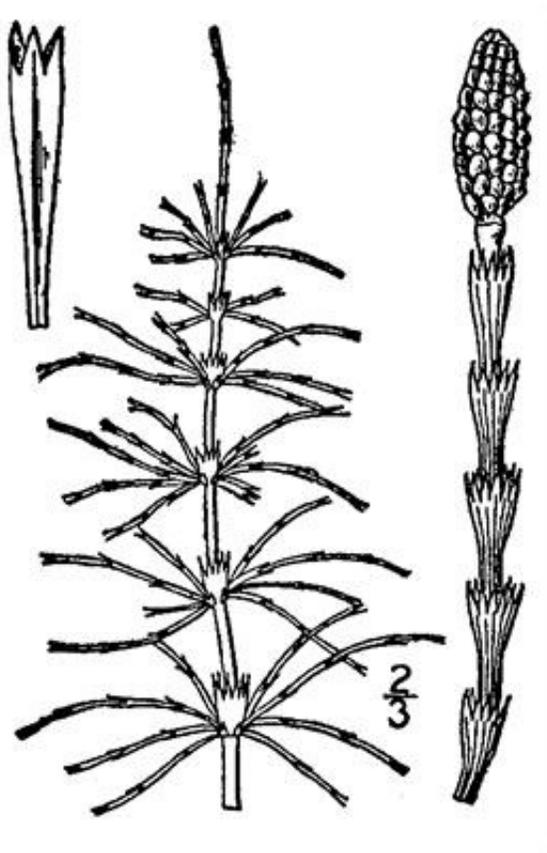
Stems monomorphic, annual, 5–80 cm × 1–4 mm, nearly solid with 4 to 10 ridges. Branches whorled on upper half. Sheaths green, the dark teeth with hyaline margins. Strobili 5–15 mm long with blunt tips, maturing in summer (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet soil and shallow water, often in forests; valleys to montane, occasionally subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Meadow Horsetail - *Equisetum pratense*

http://FieldGuide.mt.gov/detail_PPEQU01060.aspx



Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Sterile stems annual, 5–30 cm × 1–2 mm, ascending or erect, nearly solid with 10 to 18 ridges, pale green and branched. Sheaths green; the teeth with a dark center and light margins. Fertile stems tan, unbranched, occurring in spring, often becoming green and branched later in the season. Strobili blunt, 10–20 mm long, uncommon. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow water of seeps, swamps, stream margins; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Dwarf Scouring-rush - *Equisetum scirpoides*

http://FieldGuide.mt.gov/detail_PPEQU01080.aspx



Global Rank: G5
State Rank: S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Stems monomorphic, dark green, evergreen, solid, 5–15 cm × =1 mm, prostrate or ascending, twisted, mostly unbranched or branched at the base, with 6 ridges. Sheaths green below, dark above; the teeth hyaline with dark centers and a bristle tip. Strobili =5 mm long, sharp-pointed (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Damp, often calcareous soil of spruce forests; valleys to montane. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Woodland Horsetail - *Equisetum sylvaticum*

http://FieldGuide.mt.gov/detail_PPEQU01090.aspx



Global Rank: G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Sterile stems annual, 15–70 cm × 2–5 mm with 10 to 18 ridges, green, twice branched, nearly solid. Sheaths green below and medium brown above with teeth often united into a few broad lobes below mid-stem. Fertile stems tan, unbranched in spring, later becoming green and branched. Stobili blunt, 10–30 mm long (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet meadows, marshes, ponds, along forested streams; valleys to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Variegated Horsetail - *Equisetum variegatum*

http://FieldGuide.mt.gov/detail_PPEQU010B0.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Stems monomorphic with 3 to 12 ridges, evergreen, 6–30 cm × 1–3 mm, branched at the base, erect or ascending. Sheaths green with a terminal black band, teeth white with a black center and hair-like tip. Strobili 5–10 mm long with a sharp-pointed tip, maturing in summer. Our plants are subspecies *variegatum* (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet, often calcareous, gravelly soil along seeps, streams, lakes at all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Horsetail (Hybrid) - *Equisetum x ferrissii*

http://FieldGuide.mt.gov/detail_PPEQU010F0.aspx



Global Rank: GNA
State Rank: SNA

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants 20-180 cm; stems unbranched, sheaths dark-girdled with age; teeth 14-32 per sheath, articulate and shed or persistent. Cone apex pointed; spores white and misshapen (Hauke, 1993 in Flora N. Amer., Vol. 2).

Habitat

Moist areas including shorelines, riverbanks, roadsides and prairies (Haute, 1993, in Flora N. Amer., Vol. 2).

Northern Oak Fern - *Gymnocarpium dryopteris*

http://FieldGuide.mt.gov/detail_PPDRY0D030.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants with long, slender, scaly rhizomes. Leaves to 45 cm long, scattered, erect, petiole longer than blade. Leaf blade triangular, twice pinnate below but once above. Pinnae: lowest pair similar in size to the rest of blade. Pinnules pinnately lobed or toothed, glabrous or slightly glandular. Sori circular, borne on veins near margins on underside of fertile pinnules. Indusium lacking (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forest; montane, subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Pacific Clubmoss - *Huperzia haleakalae*

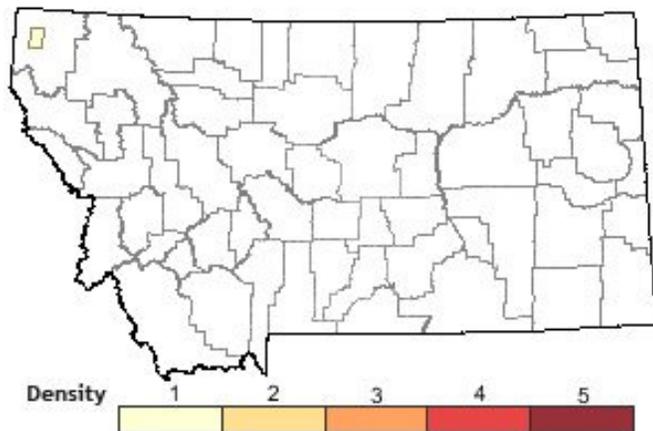
http://FieldGuide.mt.gov/detail_PPLYC02050.aspx



Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 1

General Description

Shoots 3–15 cm. Leaves 3–6 mm, entire, ascending or (usually) appressed to the stem, yellowish below, lustrous. Gemmae produced throughout (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Damp, mossy, humic soil of meadows, turf, fens, often near tree islands where snow lies late, frequently growing with ericaceous subshrubs; subalpine and alpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Chinese Clubmoss - *Huperzia miyoshiana*

http://FieldGuide.mt.gov/detail_PPLYC020L0.aspx



Status Under Review

Global Rank: G4
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Shoots to 20 cm. Leaves 3–7 mm long, entire, spreading to ascending, light to dark, lustrous. Gemmae in 2 to 3 whorls at end of annual growth or absent. This description is that given by Lesica for *Huperzia miyoshiana* (Makino) Ching (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Forest (spruce), thickets, streambanks, fens; valleys to lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Clubmoss - *Huperzia occidentalis*

http://FieldGuide.mt.gov/detail_PPLYC020N0.aspx



Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Shoots 10–30 cm, prominently curved at the base. Leaves reflexed to spreading, 4–10 mm, light green, lustrous. Gemmae in 1whorl at end of annual growth (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet montane forest (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Bolander's Quillwort - *Isoetes bolanderi*

http://FieldGuide.mt.gov/detail_PPISO01010.aspx



Global Rank: G4
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

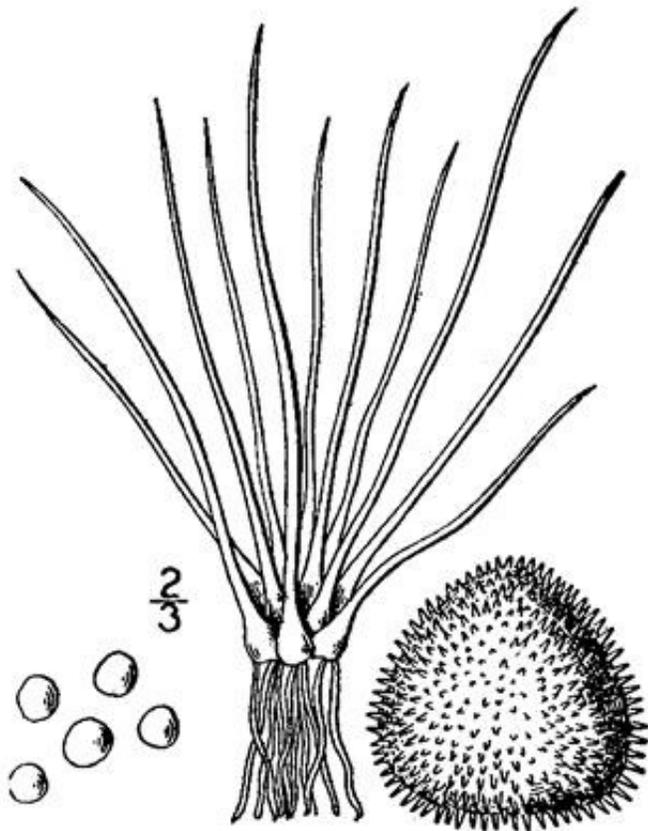
Plants aquatic. Leaves 2–20 cm long, tapering to a long point. Sporangia 3–4 mm long. Megaspores 0.3–0.5 mm wide (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Unconsolidated mud in shallow water of lakes; montane to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Spiny-spore Quillwort - *Isoetes echinospora*

http://FieldGuide.mt.gov/detail_PPISO01040.aspx



Status Under Review

Global Rank: G5
State Rank: S2?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants aquatic. Leaves 6–15 cm long with a blunt tip. Sporangia 3–6 mm long. Megaspores 0.4–0.6 mm wide (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Unconsolidated mud in shallow water of lakes and sloughs; valleys to lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Howell's Quillwort - *Isoetes howellii*

http://FieldGuide.mt.gov/detail_PPISO01080.aspx



Status Under Review

Global Rank: G4G5
State Rank: S2?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants terrestrial or aquatic. Leaves to 25 cm long, often black near the base, long-tapering. Sporangia 3–7 mm long. Megaspores 0.3–0.5 mm wide (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow water of ponds, lakes and sloughs; valleys (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Quillwort - *Isoetes occidentalis*

http://FieldGuide.mt.gov/detail_PPISO01110.aspx



Status Under Review

Global Rank: G4G5
State Rank: S1?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants aquatic. Leaves to 20 cm, gradually tapering. Sporangia 3–6 mm long. Megaspores 0.4–0.8 mm wide (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Our one record from shallow water of a montane lake in Missoula County (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Alpine Clubmoss - *Lycopodium alpinum*

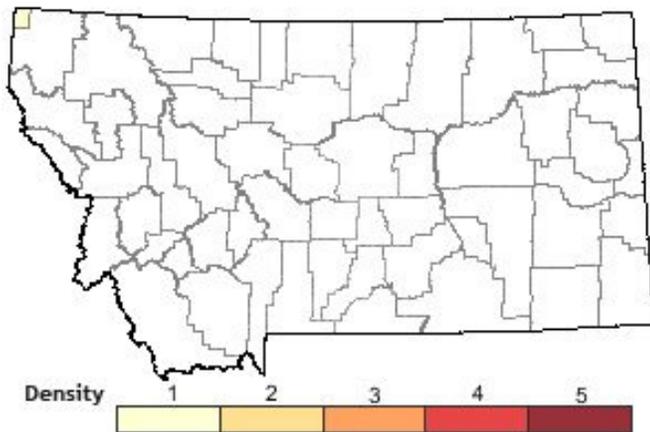
http://FieldGuide.mt.gov/detail_PPLYC01020.aspx



Status Under Review

Global Rank: G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 1

General Description

Stems prostrate, just below ground. Shoots clustered, 3–8 cm; branches 4-angled, winged. Leaves 2–3 mm long, 4-ranked, overlapping, margins turned under, dorsal and ventral shorter than lateral pair; alternate pairs decurrent. Strobili 5–20 mm long, solitary, sessile. Sporophylls 2–4 mm long, lanceolate with wavy margins (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist tundra in the alpine and subalpine zones.

Stiff Clubmoss - *Lycopodium annotinum*

http://FieldGuide.mt.gov/detail_PLYC01030.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

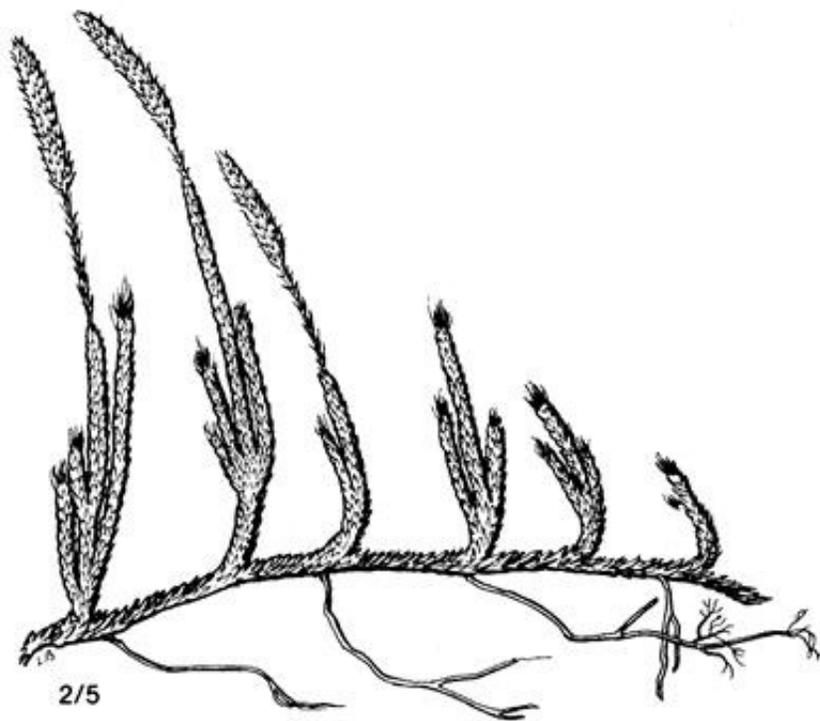
Stiff club-moss, a perennial, has elongated horizontal stems trailing on the ground, rooting at intervals, mostly unbranched. Upright shoots are clustered, mainly unbranched or sparsely branched near the base, 1.2-1.6 cm in diameter and to 20 cm or more in height; annual bud constrictions abrupt and conspicuous. Lateral branchlets few but without the annual constrictions. Leaves dark green, spreading to reflexed, linear-lanceolate (lance-shaped) 2.5 x 6 mm, stiff, sharp pointed, lacking a hair tip. Strobili (cone-like structure composed of overlapping scales bearing spore-containing structures) sessile at the ends of the shoots, solitary, 15-30 x 3.5-4.5 mm. Sporophylls (scales of the strobili) to 3.4 x 2 mm, abruptly narrowed to pointed tips.

Habitat

Mesic to wet forest; valleys to subalpine, occasionally alpine. A small form of this species can be found growing in Sphagnum moss at the margin of fens (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Running-pine - *Lycopodium clavatum*

http://FieldGuide.mt.gov/detail_PLYC01080.aspx



33. *Lycopodium clavatum*
var. *monostachyon*
© Canadian Museum of Nature - Lynn Bartosch

Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Shoots to 20 cm, solitary, often with short, arm-like branches. Leaves spreading or ascending, 3–6 mm long, narrow, entire-margined with hair-like tips. Strobili 1–4 cm long, 2 to 4 spreading or ascending on a branched peduncle sparsely set with yellowish bracts. Sporophylls broadly lanceolate, dentate with a hair-like tip. Similar in stature to the more common *L. annotinum*, but the long leaf tips are distinctive. One collection from Flathead Co. (C.L. Hitchcock 1868, MONTU) has a solitary strobile but otherwise appears to belong here (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forest and margins of fens; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Trailing Clubmoss - *Lycopodium complanatum*

http://FieldGuide.mt.gov/detail_PPLYC01090.aspx



Global Rank: G5
State Rank: S3S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Stems prostrate on or just below ground. Shoots 10–25 cm; branches strongly flattened. Leaves 4-ranked, appressed, clasping, overlapping; lateral pair linear, dorsal and ventral much shorter. Strobili 1 to 3, pedunculate, 1–9 cm long. Sporophylls 2–3 mm long, fan-shaped with an abrupt point. Shoots resemble twigs of western redcedar (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forests, especially cedar-hemlock; montane and lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Treelike Clubmoss - *Lycopodium dendroideum*

http://FieldGuide.mt.gov/detail_PPLYC010B0.aspx



Species of Concern

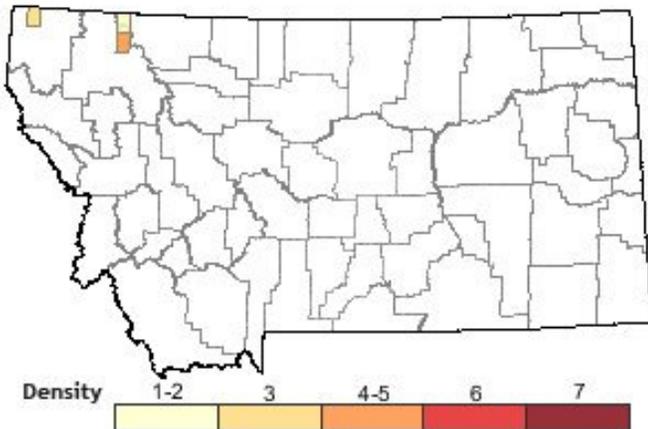
Global Rank: G5
State Rank: S2

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 10

General Description

Treelike Clubmoss resembles a miniature coniferous tree. The scattered, branched stems are 12-30 cm high and arise from deep rhizomes. Stems and branches are densely clothed in 6-8 ranks of narrow, sharp-pointed leaves that are 2-5 mm long. The spores, each subtended by a broadly lance-shaped bract, or sporophyll, are 2-4 mm long and are borne in dense, cone-like, brownish, 2-4 cm long spikes located at the tips of erect branches.

Habitat

Moist, coniferous forest in the valley and lower montane zones.

Northern Bog Clubmoss - *Lycopodium inundatum*

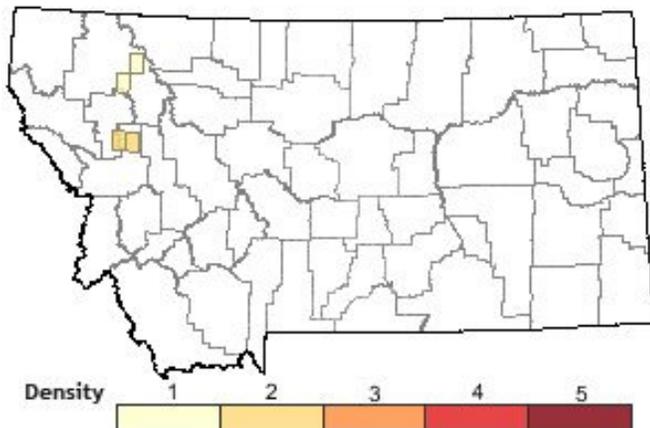
http://FieldGuide.mt.gov/detail_PPLYC03060.aspx



Species of Concern

Global Rank: G5
State Rank: S2

AGENCY STATUS
USFWS:
USFS: SENSITIVE
BLM:



Number of Observations: 6

General Description

Northern Bog Clubmoss resembles a large moss. It has prostrate or arching stems that root at irregular intervals and give rise to erect branches that are up to 10 cm high. The narrow, pointed leaves are 4-8 mm long and clothe the stems and branches in 8-10 ranks. Each spore is subtended by a bract, or sporophyll, that is similar to the leaves and borne in dense spikes at the top of erect branches. It is difficult to distinguish the fertile and sterile portions of the branches.

Habitat

Wet, organic soil of nutrient-poor fens in the valley and lower montane zones.

Running-pine - *Lycopodium lagopus*

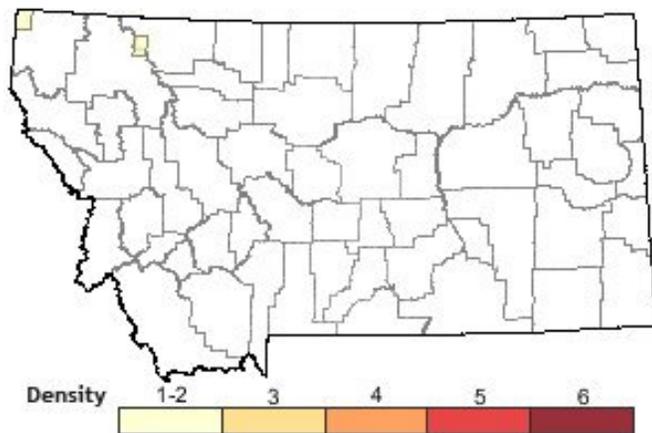
http://FieldGuide.mt.gov/detail_PPLYC011K0.aspx



Species of Concern

Global Rank: G5
State Rank: S2

AGENCY STATUS
USFWS:
USFS: SENSITIVE
BLM:



Number of Observations: 4

General Description

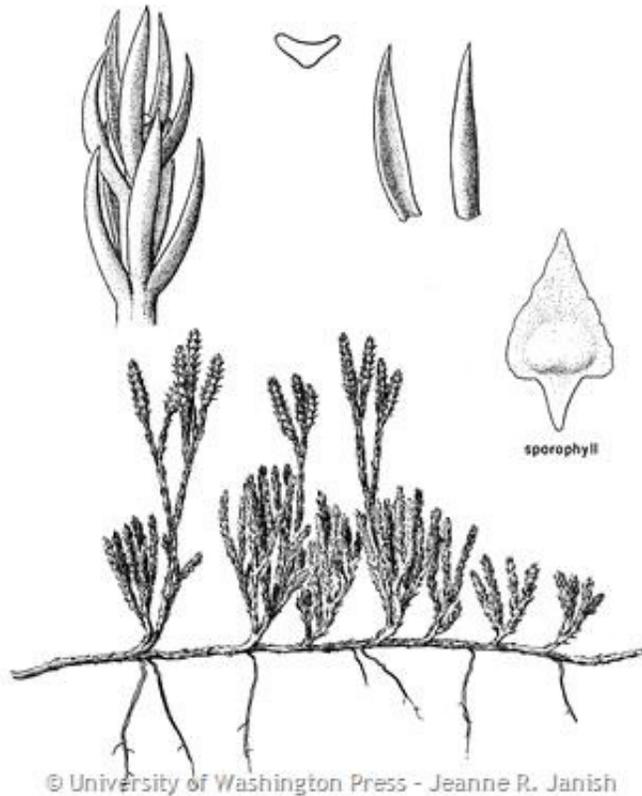
Running-pine is a low evergreen perennial with densely leafy, branched, upright shoots that are 5-8 mm in diameter including the leaves, arising from sparsely leafy, rooted, horizontal stems at the surface. Upright shoots have 2-4 low, ascending vegetative branches and a taller, terminal branch that usually bears a single club-like cone. Appressed to ascending green leaves are crowded on the branches in longitudinal rows of six or more. The leaves are 3-5 mm long by 0.4-0.7 mm wide, with smooth margins and pointed tips ending with hairs. A solitary (rarely 2) terminal cone is borne on an unbranched peduncle, 3.5-12.5 cm long, with sparse appressed leaves. The cone is 20-55 mm long by 3-5 mm long, and is composed of tightly packed sporophylls that are 1.5-2.5 mm long and gradually taper to a hair tip. Kidney shaped sporangia are borne within at the bases of the sporophylls.

Habitat

Turf along drainages and moist slopes in alpine zone.

Alaskan Clubmoss - *Lycopodium sitchense*

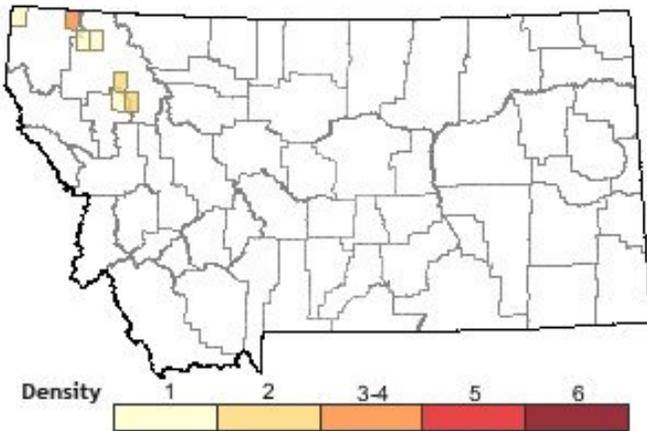
http://FieldGuide.mt.gov/detail_PLYC01100.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:



Number of Observations: 12

General Description

Alaskan Clubmoss is a low evergreen perennial with clustered, branching, upright shoots growing from slender, above-ground or slightly buried, rooting, horizontal stems. Branches are circular in cross-section, most are short at 3-10 cm, vegetative, and bear leaves in longitudinal rows of five. The thick, firm, incurved, sharp pointed green leaves are 3-6 mm long and less than 1 mm wide. Fewer, taller reproductive branches, up to 17.5 cm tall, have similar but less crowded leaves, often in ranks of six, and bear one or more terminal club-like cones where spores are produced. The cones, about 1-4 cm long, are composed of tightly packed straw colored or slightly greenish sporophylls, ca. 2-3 mm long and 1.5-3 mm wide, with kidney-shaped sporangia attached within at their bases.

Habitat

Open, often rocky places at montane to alpine zones.

Pepperwort - *Marsilea oligospora*

http://FieldGuide.mt.gov/detail_PPMAR010B0.aspx



Status Under Review

Global Rank: G5
State Rank: S1?

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

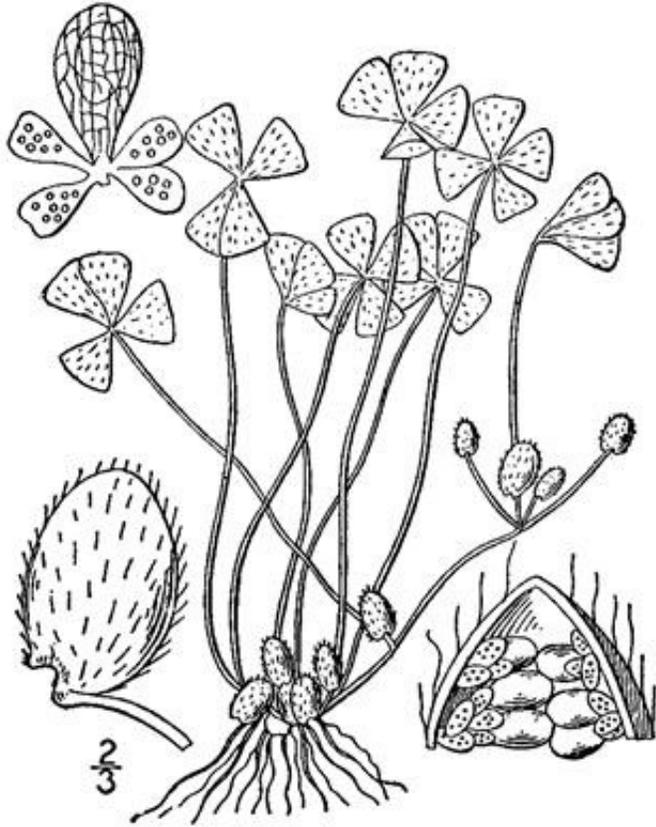
Leaf petioles 3–6 cm long. Pinnae 6–15 mm long, pilose. Sporocarps nodding, 5–6 mm long, long-hairy but glabrous with age; lower tooth ca. 0.5 mm; upper tooth blunt, smaller, or absent (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Shallow water; valleys; collected in Lake Co. and the Blackfoot River Valley (Lesica 2012).

Hairy Water Fern - *Marsilea vestita*

http://FieldGuide.mt.gov/detail_PPMAR01080.aspx



Global Rank: G5
State Rank: S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaf petioles 1–20 cm long (to 40 cm when floating). Pinnae 3–19 mm long, sparsely pubescent to glabrous. Sporocarps slightly nodding, 3–6 mm long, densely pubescent but glabrous with age; lower tooth ca. 0.5 mm; the upper tooth longer and acute (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Fresh to saline, shallow water of ponds, reservoirs, sloughs; plains, valleys (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Adder's Tongue - *Ophioglossum pusillum*

http://FieldGuide.mt.gov/detail_PPOPH020F0.aspx



Species of Concern

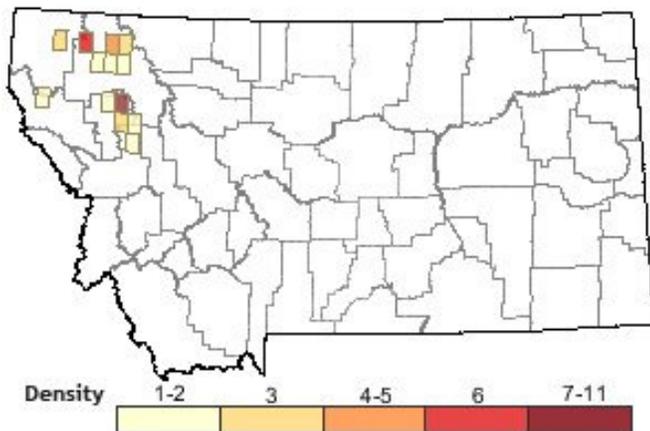
Global Rank: G5
State Rank: S3

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 41

General Description

Adder's Tongue is an herbaceous perennial that is up to 20 cm high. Each plant has an erect, leafless stem that is 2-15 cm high and which branches into a single leaf-like, ascending, sterile blade and into an erect, spike-like fertile stalk. The sterile blade is elliptic to broadly lance-shaped and 2-8 cm long with entire margins and a rounded to pointed tip. The upper portion of the fertile stalk has 2 rows of contiguous spore-bearing sacs on one side.

Habitat

Wet meadows, margins of fens, and gravelly moist soil in the valley and montane zones.

Brewer's Cliffbrake - *Pellaea breweri*

http://FieldGuide.mt.gov/detail_PPADI0H040.aspx



Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves 4–15 cm long with petiole shorter than the blade. Leaf blade linear, once pinnate. Pinnae ascending, some 2-lobed or mitten-shaped. Sporangia with 64 spores (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Crevices of limestone cliffs; montane to treeline. This species is strongly associated with Paleozoic rock formations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Smooth Cliffbrake - *Pellaea glabella*

http://FieldGuide.mt.gov/detail_PPADI0H060.aspx



Status Under Review

Global Rank: G5
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves 2–40 cm long with petiole shorter than or equal to the blade. Leaf blade linear, 1–2 times pinnate below. Pinnae ascending, narrowly elliptic, deeply lobed, or pinnate into lanceolate pinnules. Sporangia with 32 or 64 spores (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Cliff crevices, most commonly on limestone; montane to subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Northern Beechfern - *Phegopteris connectilis*

http://FieldGuide.mt.gov/detail_PPTHE02010.aspx



Species of Concern

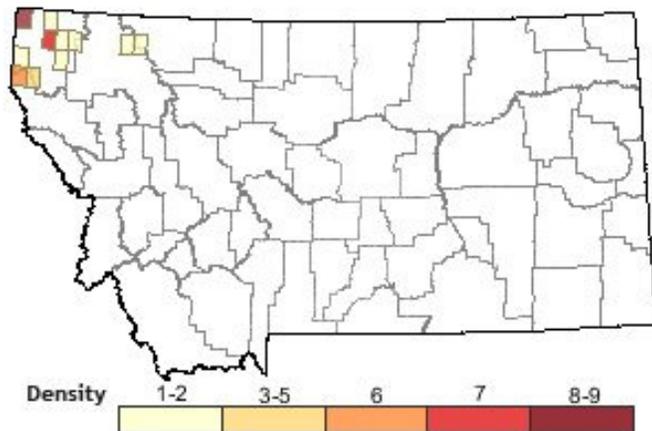
Global Rank: G5
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS: SENSITIVE

BLM:



Number of Observations: 37

General Description

Northern Beechfern has leaves that are scattered along long, slender rhizomes. The leaves are 1.5-5 dm long, with about half of their length being a long, slender petiole. The blades are beset with hairs; especially ciliate hairs exist along the margins and rachis. There are 10-25 pairs of pinnae in each pinnately compound leaf. The sori are borne just inside the margins of each pinnule.

Habitat

Mesic, western redcedar forests and shaded cliffs in the valley to subalpine zones.

Western Polypody - *Polypodium hesperium*

http://FieldGuide.mt.gov/detail_PPPOL020G0.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Small plants with long, creeping, scaly rhizomes. Leaves scattered, monomorphic, 3–35 cm long with a petiole shorter than the blade. Leaf blade glabrous, somewhat leathery, lanceolate, once pinnately lobed almost to the rachis, with shallowly toothed or wavy margins. Sori circular, borne midway between midvein and margins of leaf divisions. Indusium absent (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet, usually moss-covered boulders, cliffs; valleys to subalpine. (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Anderson's Swordfern - *Polystichum andersonii*

http://FieldGuide.mt.gov/detail_PPDRY0R030.aspx



Status Under Review

Global Rank: G4
State Rank: S2S3

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves arching, 20–70 cm long, commonly with 1 to several scaly, bulblets on central axis among upper pinnae. Leaf blade narrowly elliptic or lanceolate. Pinnae narrowly lanceolate, the lower deeply divided, 2–10 cm long with sharp-pointed lobes. Indusium with sparse marginal hairs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forest, thickets; montane, lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Kruckeberg's Swordfern - *Polystichum kruckebergii*

http://FieldGuide.mt.gov/detail_PPDRY0R0C0.aspx



Species of Concern

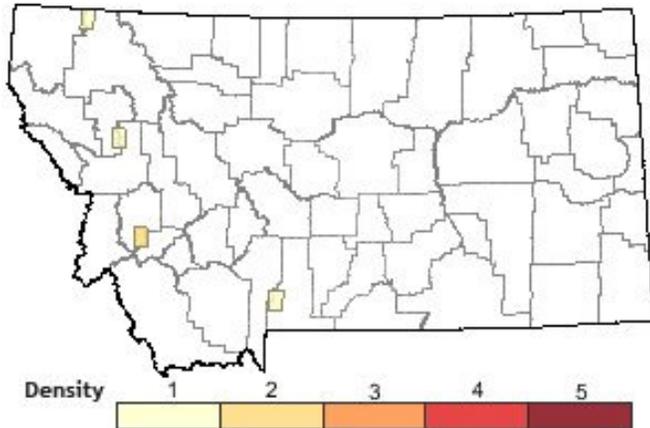
Global Rank: G4
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 5

General Description

Polystichum kruckebergii has evergreen fronds that are 9-35 cm long and clustered on a short, ascending rhizome. Each frond consists of a scale-covered petiole, or stipe, that is 2-11 cm long and a narrowly lance-shaped blade, or lamina, that is 7-23 cm long and deeply lobed into 20-40 leaflets, or pinnae. Each pinna has a toothed and spiny margin, and the lower ones are lobed at the base. Spores are borne in small clusters, or sori, that are partially covered by a membranous disk, or indusium, that is located on the undersides of the upper pinnae.

Habitat

Cliff crevices and talus slopes in montane to alpine zones.

Northern Swordfern - *Polystichum lonchitis*

http://FieldGuide.mt.gov/detail_PPDRY0R0F0.aspx



Global Rank: G5
State Rank: S4S5

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves erect, 5–60 cm long. Leaf blade nearly linear. Pinnae rarely overlapping, broadly lanceolate to mitten-shaped, 5–30 mm long with spreading-spiny margins. Indusium with jagged margins (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Wet, rocky slopes, avalanche chutes, cliffs, moist forest; all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Western Swordfern - *Polystichum munitum*

http://FieldGuide.mt.gov/detail_PPDRYOR0H0.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Leaves arching, 30–120 cm long. Leaf blade narrowly lanceolate. Pinnae not overlapping, narrowly lanceolate to linear with a shallow lobe at the base, 2–8 cm long with minutely toothed, erect-spiny margins. Indusium with fringed margins (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist forest, often with *Thuja plicata*; valleys to montane (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Mountain Swordfern - *Polystichum scopulinum*

http://FieldGuide.mt.gov/detail_PPDRY0R0N0.aspx



Species of Concern

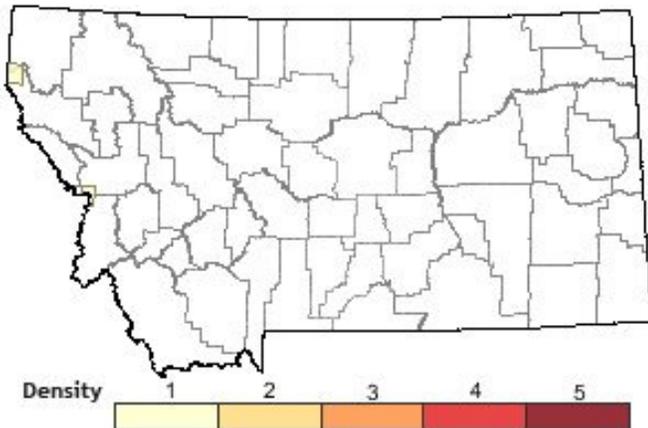
Global Rank: G4
State Rank: S1S2

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 2

General Description

Mountain Holly-fern has evergreen fronds that are 10-40 cm long, and clustered on a short, stout, scaly rhizome. The blades are made up of 20-40 primary pinnae on each side of the rachis. The primary pinnae are 1.5-3.2 mm long, and pinnately lobed with large basal lobes. Above the basal lobes, the pinnae are 1/3 to 1/2 as wide as long, and the lobes become progressively more shallow-cut and tooth-like. The lobes or teeth are inconspicuously sharp-tipped, and the apical tooth is larger than those nearest it. Circular clusters of sporangia borne on the undersides of the middle and upper pinnae are covered by indusia.

Habitat

Moist rock crevices in subalpine zone, and moist rocks along rivers in the valleys.

Bracken Fern - *Pteridium aquilinum*

http://FieldGuide.mt.gov/detail_PPDEN08010.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Perennials with vigorously spreading, scaleless rhizomes. Leaves monomorphic, scattered, 30–150 cm long, petiole ca. same length as the blade. Leaf blade 3 times pinnate, the first division usually ternate. Pinnae 20–50 cm long. Subpinnae alternate on the rachis, narrowly lance-shaped. Pinnules linear, broadened at the base, upper surface glabrous but hairy below. Fertile pinnules with recurved margins partly covering continuous series of sori (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Moist to wet forest, woodlands and meadows, thickets within forested landscapes, often with *Thuja plicata* or along streams; montane to occasionally subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Dense Spike-moss - *Selaginella densa*

http://FieldGuide.mt.gov/detail_PPSEL010C0.aspx



Global Rank: G5
State Rank: S5

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Plants forming cushions or mats. Leaves in whorls of 4 to 6, appressed, linear lanceolate, 2–4 mm long with a median groove and white bristle-tip. Strobili 4-sided, 1–3 cm long. Sporophylls broadly lanceolate to ovate with a bristle-tip (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Soil and rock of grasslands, outcrops, stony slopes, exposed ridges at all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Lesser Spikemoss - *Selaginella densa* var. *densa*

http://FieldGuide.mt.gov/detail_PPSEL010C4.aspx



Global Rank: G5T5?
State Rank: SNR

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

See description for species. The sporophylls are ciliate along most or all of their edges; the bristle tips of many leaves are longer than 1 mm.

Habitat

This variety is restricted to the plains and valleys, where it can increase in frequency due to drought or overgrazing (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Rocky Mountain Spikemoss - *Selaginella densa* var. *scopulorum*

http://FieldGuide.mt.gov/detail_PPSEL010C2.aspx



Global Rank: G5T4T5
State Rank: SNR

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

See also species' description. According to Lesica (2012) this variety is ciliate only along the lower portion of the sporophylls.

Habitat

Lesica (2012) reports that variety *scopulorum* occurs from grasslands to rocky sites continuously across the elevational range of the variety.

Standley's Spike-moss - *Selaginella densa* var. *standleyi*

http://FieldGuide.mt.gov/detail_PPSEL010C3.aspx



Status Under Review

Global Rank: G5T3T5
State Rank: SU

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

See species' description. Lesica (2012) indicates that variety *standleyi* can be distinguished from the other varieties by sporophylls being ciliate throughout their length, but with the bristle-tips of leaves all being 1 mm or less long.

Habitat

Restricted to elevations near or above timberline (Lesica 2012).

Low Spike-moss - *Selaginella selaginoides*

http://FieldGuide.mt.gov/detail_PPSEL01110.aspx



Species of Concern

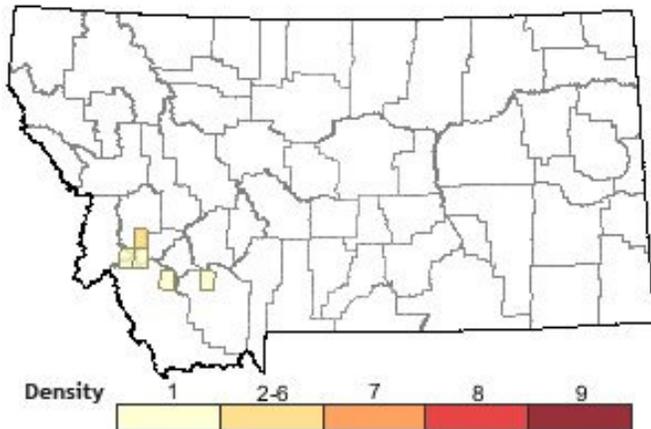
Global Rank: G5
State Rank: S2S3

AGENCY STATUS

USFWS:

USFS:

BLM:



Number of Observations: 10

General Description

Low Spike-moss is a low, moss-like, glabrous plant with branched, prostrate to ascending stems. The thin, narrowly lance-shaped leaves are 1-3 mm long, are spirally arranged on the stem, and have sparsely spine-toothed margins. The upper leaves of fertile stems are larger, more broadly lance-shaped, and bear in their axils 1 to a few spores that are ca. 0.5 mm across.

Habitat

Wet, mossy soil of seep areas and moss-covered soil of meadows and rock outcrops in the montane and subalpine zones.

Wallace's Spike-moss - *Selaginella wallacei*

http://FieldGuide.mt.gov/detail_PPSEL011C0.aspx



Global Rank: G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

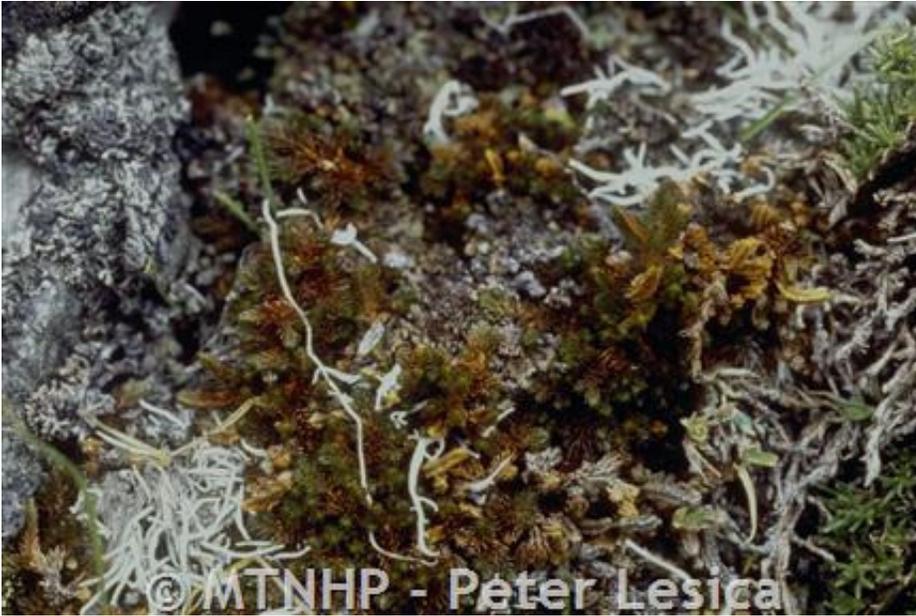
Plants usually loosely branched. Leaves in whorls of 4, 1–3 mm long, stiff, strap-shaped with a whitish tip; the medial groove with distinct ridges; margins ciliate. Strobili 1–3 cm long, 4-angled. Sporophylls broadly lanceolate, ciliate with a short bristle-tip. The green leaves contrast sharply with the brown stem where they are joined (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Vernally moist, shallow soil, outcrops, talus; at all elevations (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Watson's Spike-moss - *Selaginella watsonii*

http://FieldGuide.mt.gov/detail_PPSEL011D0.aspx



Status Under Review

Global Rank: G4
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Plants forming mats. Leaves in indistinct whorls of 4, 1–3 mm long, stiff, oblong to linear, with a short, whitish tip; the medial groove with distinct ridges; margins ciliate. Strobili 1–3 cm long, 4-angled. Sporophylls ovate, ciliate on the lower half or glabrous with a short bristle-tip (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Exposed, rocky sites at middle and upper altitudes in the mountains, sometimes above timberline.

Western Cliff Fern - *Woodsia oregana*

http://FieldGuide.mt.gov/detail_PPDRY0U080.aspx



Status Under Review

Global Rank: G5
State Rank: S3?

AGENCY STATUS
USFWS:
USFS:
BLM:

Number of Observations: 0

General Description

Leaves with sparse glandular hairs; the petioles ca. as long as blades and resistant to shattering. Leaf blades linear to narrowly elliptic, often twice pinnate below, 5–15 cm long, lower pairs of pinnae widely separated. Pinnules lobed or toothed, glabrous or with tack-like glandular hairs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Dry, rocky slopes; valleys to lower subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Rocky Mountain Woodsia - *Woodsia scopulina*

http://FieldGuide.mt.gov/detail_PPDRY0U0B0.aspx



Global Rank: G5
State Rank: S4

AGENCY STATUS

USFWS:

USFS:

BLM:

Number of Observations: 0

General Description

Leaves with easily shattering petiole. Leaf blades twice pinnate, 4–25 cm. Pinnules and rachis with multicellular, non-glandular hairs as well as shorter tack-like glandular hairs (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).

Habitat

Outcrops, rock slides and thin soil of rocky slopes; montane, subalpine (Lesica 2012. Manual of Montana Vascular Plants. BRIT Press. Fort Worth, TX).
